

HARMONIES OF NATURE,

BY

J. B. H. DE SAINT-PIERRE;

BEING

A SEQUEL

TO HIS

STUDIES OF NATURE.

IN THREE VOLUMES.

— — —

WITH A PORTRAIT,

AND A

PREFATORY ACCOUNT OF THE AUTHOR, AND THE WORK

By LOUIS AIMÉ-MARTIN.

— *Miseris succurrere disco.* ÆN.

TRANSLATED

By W. MEESTON, A.M.

VOL. III.

LONDON:

PRINTED FOR BALDWIN, CRADOCK, AND JOY,
47, PATERNOSTER ROW.

1815.

C. Baldwin, Printer,
New Bridge-street, London.

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HARMONIES OF NATURE.

BOOK VI.

HARMONIES OF MAN.

FEELING proceeds from the heart, in the same way as rational conclusions are deduced from the operations of the mind. It is to the heart that Nature has directed all our senses, and all the light of our understandings. This may be best understood by taking a particular example, such as the sense of sight. There is, at the junction of our two optic nerves, a sensorium, which receives the images of objects; this sensorium communicates with the heart, as otherwise we should not have a consciousness of what we see. The eye-sight is generally affected when any thing has occurred to affect the heart. Similar observations are applicable to truths purely intellectual; such, for example, as those of geometry. All demonstrations terminate in evidence: now evidence operates on our senses, and may be called the reason of Nature, or the *ne plus ultra* of our reason, in harmony with that of Nature.

Nothing is more dangerous than to attempt pushing our reasoning powers beyond that point to which they are supported by the concurrence of Nature;—hence the fallacious refinements of metaphysicians. It was by going beyond this limit that the subtile Malebranche fell into the strange notion that animals had no feeling. It is by following a similar course that our modern ideologists have fallen into atheism. Truth may be compared to one of the solar rays: if we attempt to fix it in ourselves, it will dazzle and blind us; but if we are content with considering only the objects which it renders visible to us, it will both enlighten our mind and warm our heart. It is to the heart that its evidence is directed; for the discovery of truth excites joy, admiration, and enthusiasm, even in the coldest geometrician. It was this feeling which made Archimedes rush out of his bath undressed, and run in transport through the streets of Syracuse—Archimedes, who saw unmoved the sack of that city, and received, without shrinking, a fatal blow from a vengeful enemy. Evidence may be called a harmony of the soul with divine truth. Its first sentiment is a heavenly transport, such as we should feel on discovering a ray of light in the midst of profound darkness.

The mind thus acquires no knowledge without imparting a consciousness of it to the heart.

Certainty is then, when we come to analyze it, a sentiment resulting only from the laws of Nature; for the laws of man are too changeable. In human systems nothing is to be depended on unless it produce in us a conviction of evidence; that is, unless it be founded on the laws of Nature. It deserves to be remarked that Nature communicates to us a knowledge of those laws only which are in connexion with our wants. We have no consciousness of any others.

We may define science, accordingly, a feeling of those laws of Nature which have reference to man. This definition, simple as it is, is not only more exact, but of greater compass than may be at first imagined: it points out the ranges of our knowledge, and shows the extent to which we can carry it; for it follows that, when we have not a feeling of a truth, we cannot be said to have a knowledge of it; and, on the other hand, that knowledge may be expected to follow as soon as we have a feeling of it. This definition of knowledge in general will be found applicable to all its particular branches. Theology, which treats of the knowledge of all the attributes of God, can be only a consciousness of the laws established by God, between himself and man. The case is the same in regard to all sensations, and particularly in respect to those which, like chemistry, profess to decompose natural

substances and reduce them to their first elements.

I must be understood as speaking here only of human knowledge; for as to true and accurate knowledge, we must confess that it resides only with the Divinity. He alone has the secret of his intelligence, of his power, of the principles of Nature, of the origin and duration of the world. Each created being has that portion of knowledge, or rather of consciousness, which is necessary for his situation, and which he cannot communicate to any other. Will any philosopher be able to discover the source of the endless variety of the instincts of animals? The example of a caterpillar, which weaves its covering in autumn, to pass in comfort a winter which it has never known, and which leaves an opening in it to go out as a butterfly in spring, a season of which it can have no knowledge, is at once sufficient to overturn the arguments of those who deny the existence of innate ideas.

Human knowledge therefore consists, strictly speaking, in a feeling of the laws of Nature in regard to man. Morality can be nothing else than a feeling of the laws established by God between man and man. This definition suggests the important conclusion, that all sciences have a connexion with morals, since they all point eventually towards man.

A man living in a solitary situation would naturally form his habits from the influence of surrounding objects. He would indulge in indolence during a hot season, in the intemperate use of fruit, in harshness towards innoxious animals, and probably in a variety of other irregularities, according to the particular circumstances in which he might happen to be placed. We may figure to ourselves that every object would send a moral ray to the seat of his feeling, and a visual ray to that of his understanding. His moral, like his physical life, would be in harmony with these two organs, or rather with the faculties which they respectively contain. His understanding presents objects to him; his feeling adopts or repels them.

But it is particularly when in the midst of his fellow-creatures that he may be considered as a focus of all moral impressions. Nature, in making man subject to a variety of wants, in order to give him a relish of what enjoyment is, and to oblige him to aid his fellow-creatures, has put into the heart of us all the grand rule of social intercourse, by telling us to do unto others what we wish that they should do unto us. It is then by means of his reason harmonizing with the laws of Nature, that man first puts himself in the place of another, and feels the laws of morality rising in his heart, by a mixed sense

of his own interest and of that of his equals. Let no man, therefore, separate what Nature has put together, or attempt to set up the barrier between their reason and their heart. The bad man is he who confines his reason to objects regarding himself personally, who merely looks at other men, but has no feeling for them.

Morality consisting then in a feeling of the laws which God has established between man and man, it follows that a mere essay on morals can be of little use to children. A child is just as incapable of acquiring a speculative knowledge of morality, as of extending his range of eyesight by studying the theory of vision. He could comprehend no part of such a discussion, were it composed with all the arguments of Bayle; were it replete with the most beautiful images; and were it written with the grace of Fenelon, and the energy of Rousseau.

Suppose a child brought up in a gallery of landscapes without ever having seen the country: he would observe nothing in the paintings but colour and surface; and on seeing the country for the first time, he would apply to it the same rules of judging as to his gallery. He would be like the person born blind, who was endowed suddenly with sight by the removal of cataracts from his eyes. That person, at first, imagined every different object in the room to be at an

equal distance from him, and ascertained the contrary only by going to each.

Nature has established such a harmony between our sense of touch and our sight, that we form our ideas of the latter from the former, and afterwards from moving personally towards an object. This will be best understood by reference to the situation of children. My little girl, when at the age of four months, imagined, as all children do, that she could touch a flower a foot off, and used to turn her little hands around her eyes to catch it; it was not till after she could walk that she could form an idea of greater distances. It is to accelerate this knowledge that Rousseau desires us to carry a child towards the object wished for, and not to bring the object towards it, as is commonly done. All this shows that we may lay it down as a general rule, that we judge of the representation of an object only by that experimental knowledge which is conveyed by the reality. A spectator takes pleasure in looking at a painting of Vernet, in consequence only of its bringing to his recollection that series of objects which he has himself observed, and I maintain that he cannot be alive to all its merits without having seen the sea, and without having performed a voyage.

An essay on morals is like a gallery of paintings; it is interesting to those only who have a

practical knowledge of the world. The reason why so many of the allusions of Greek and Latin comedies is lost on us, and why the sentimental beauties of their tragic writers continue to impress us, is that we have but an imperfect knowledge of the manners of the ancients, while we have from personal experience a direct sense of the emotions of pity and generosity ; sentiments common to mankind in every age. A moral essay can make no impression on a child, who, from not having lived among men, is without any practical knowledge of their passions, and of the laws laid down by Nature to govern them. A child, mentioned by Rousseau, saw nothing but the difficulty of swallowing medicine in the sublime anecdote of Alexander on the bed of sickness, when he took a potion from the hand of his physician, and made him read a letter accusing him of a design to poison him. The child had no conception of any thing in the shape of perfidy, and knew no other bitterness than that of the drug. I perfectly remember that, when a child, I derived much amusement from the fables of La Fontaine, because the simplicity of their images goes to the heart, and because I knew the habits of several animals ; but their application was very tiresome, because I was a stranger to the habits of men ; so that I got into the practice of reading the fable and passing over the appli-

cation ; treating my lesson like my breakfast, by eating the sweet part and leaving the plain.

It would be still worse to hold out to children only the abstract doctrines of morals, without enlivening them with images. How could they learn what conscience and justice are by a mere course of reasoning? What better would they be, in fact, were they to acquire from precept a power of defining like Aristotle, or of analyzing like Locke and Condillac? To teach them virtue by theory is like teaching them to speak by grammar rules, or to walk by the laws of equilibrium : in such things as these their mothers, be assured, will bring them faster forward than all the professors of a university. Knowledge of every kind depends on experience, and the mind, like the body, is developed only by exercising it. Moral education should begin by the practice of virtue ; leaving the theoretical part to doctors or to old men. The first step in the education of children should be an acquaintance with the disposition of those around them. This they gradually acquire by living with their parents, their sisters, their brothers, and, when somewhat farther advanced, with their servants or their masters. The feelings acquired in youth seldom fail to regulate their conduct in after-life.

There is in Amsterdam, and in the neighbourhood of London, a large vessel, completely rigged,

in which the *Marine Society* boys are trained. They are accustomed to manœuvre as if at sea ; to bend and reef the sails ; to heave and cast anchor ; and to go through the various other departments of actual seamanship. Might not something of the same kind be attempted in preparing young people for a knowledge of the world ? If a school should be an image of the father's house, education ought to be an outline of future life ; but in what manner shall we proceed to make easy and lasting impressions on the minds of children ? This I shall now endeavour to explain.

It belongs to the head to comprehend, and to the heart to feel. In most animals instinct receives impressions, of a different extent indeed from ours, but bearing a similar proportion to the animal, as our perceptions bear to us. Insects see through a microscopic eye, and birds frequently as in a telescope ; but in each the portion of intellect possessed is limited to industry of one kind, and the heart to a single instinct. The mind of man, on the other hand, is open to the admission of every kind of knowledge, and his heart to every kind of feeling. He would have abandoned himself to errors of every kind, had not God enlightened him by reason, which may be defined the knowledge of what is suitable to his nature, and had not this been firmly im-

planted in his breast. It is to the powers of reason that man, alone of all organized beings, is indebted for the consciousness of the existence of a Supreme Governor; a consciousness resulting from the harmonies of the universe. Hence arises the sentiment of virtue, which is an effort made by us to relinquish selfish objects for the sake of our fellow men, in the hope of doing what is pleasant in the eyes of God. Virtue may therefore be called the true harmony of man, not only when considered as a medium between the two extremes, but as resulting from love of God and of our fellow-creatures.

It is from the course of the harmonies of Nature that the course of human virtue will be found to arise. In his long and feeble infancy, man receives, at his mother's bosom, the first sentiments of gratitude: he extracts, from the sight of the food necessary for the support of life, the feeling of a superintending Providence; and from the faithful animals with which he sports he is likely to acquire an early disposition to attachment. As he grows up he acquires, from his brothers and other companions, an idea of justice; from conjugal union, an impression of constancy; from the duties of a father, the habit of foresight; love of labour, from the industry apparent in his relations and neighbours; patriotism, from his countrymen at large; and finally,

from an extended view of the situation of mankind, he may be confirmed in those sentiments of humanity which comprise, in a manner, every virtue.

Such is the vessel in which Nature embarks each of us in order to perform the voyage of life. We come on board in infancy, a season full of darkness, from which we pass to what may be called, in the language of the imagination, the temperate clime of boyhood; in progress of years we are led to the dark and frozen regions of old age. The extremes of life, like those of the world and of the year, begin and terminate in wintry seasons; happy if, on a sea so full of shoals, we are sufficiently provided with stores and rigging before going on board. At the time of setting out our vessel is but a feeble bark; our reason, an unexperienced pilot; our heart, a compass variable as the wind. It is only by the instruction of our fathers that we can successfully sail along in the voyage of life. I shall now endeavour to lay a sketch before a youthful reader, as we lay a chart before a mariner about to undertake the circumnavigation of the globe.

Be you my guides, daughters of heaven and earth, Divine Harmonies! It is you who collect and divide the elements, and who give an organized form to all beings that vegetate and breathe. Nature has put into your hands the double torch

of existence; one extremity displaying the fires of love, the other those of discord. With the former you touch unformed matter, and make it arise into a rock with its fountains, into a tree with its fruits, or into a bird with its young; three different combinations united by the most pleasing bonds of connexion. With the fires of discord you inflame another portion of unformed matter, and there come forth the hawk, the tempest, and the volcano, which reduce the bird, the tree, and the rock, to their original elements. It is thus that, by turns, you stretch out and draw in the threads of life, not from a pleasure in overturning what you have set up, but in order to preserve the equilibrium of Nature agreeably to a plan beyond the knowledge of feeble mortals. Were you not to cause death, the sphere of life would be contracted; were you not to destroy, the season of growth would draw to an end. Without you, all would be inert and inanimate; and you link these worlds to each other by the wonderful harmony of a life which produces death, and of a death which produces life.

Wherever you carry your double torch, you give birth to a pleasant contrast of day and night; of heat and cold; of colour, shape, and movement:—the Cupids go before you, and generations follow in your train. Your vigilance is unremitted; you do not wait to rise with the orb

of day, nor do you suspend your labours on the appearance of the orb of night. You are perpetually in motion, whether on the bosom of the earth, in the bottom of the sea, or in the region of air. Immortal sisters, look down from your glorious mansion on a son of earth, and grant me, when drawing towards the close of life, the power of delineating its course with an unerring hand. Daughters of eternal wisdom, Harmonies of Nature, all men are your children; they stand perpetually in need of your assistance; without you we should be naked, wretched, discordant in language, thought, and feeling:—but you call them, by their wants, to enjoyment of every kind; by their differences, to the necessity of concord; and by their weakness, to the acquisition of empire. You admit them, by dint of knowledge and virtue, to the enjoyment of your blessings and of your immortal power. Of all beings, they alone imitate your labours; acquiring knowledge from your knowledge, wisdom from your wisdom, and religion from your inspiration.

Harmonies of Childhood.

It is on the mother's bosom that an infant learns first to make use of his senses, and to become acquainted with the elements. Warmth is communicated to him by his mother; his taste is formed by receiving her milk, while an idea of substance and of touch is given by contact with her bosom. At this early period are laid the first foundations of gratitude and filial love. It is with the first notions of thought, and the first expressions of language, that his soul receives expansion along with his body, and his mind in the same proportion as his constitution.

Filial affection is the first root of that sturdy plant, love of our country, which is destined to resist all the tempests of political machination, and to constitute the only solid foundation of society. In speaking of attachment to country, we are naturally led to fix our attention on China, where the same form of government has subsisted for a longer period than we are accustomed to see in Europe. The Chinese constitution is founded on an analogy to duties of five kinds; that of parents and children; husband and wife; sovereign and subject; reciprocal friendship; and a brotherly manner of living together. These duties are illustrated, at great length, in the works of

Confucius, who dwells on filial affection as the true basis of all political laws. The Emperor is considered the father of his people, and obtains in that character a degree of attachment and readiness of acquiescence not otherwise to be expected from his subjects. But whatever be the form of government, we shall be enabled to trace a direct connexion between patriotism and filial affection. Plutarch wishes us to say *matria* for *patria*, because we owe, he says, more gratitude to our female than to our male parents. Hence the propriety of impressing children with gratitude for the care taken of them by a mother from their earliest infancy:—let them be told of the ill health frequently attending pregnancy; the danger of child-birth; the fatigue of nursing:—let them know that their mother has often warmed them at her breast; soothed their distress by her caresses; wiped off their tears with a kiss; provided for all their wants when they could speak only by cries; and persevered in giving them, with indefatigable patience, the first ideas of sight, taste, and touch, along with instructions in speaking and walking.

Such lessons ought to commence with a hymn addressed to the Divinity, and sung alternately by boys and girls. This would be of use in giving them both a just idea of Providence by exhibiting it under the image of a mother's love,

and a sense of maternal love by connecting it with the image of Providence. This concert of children singing the praises of maternal love would consolidate their attachment to each other as members of the same family ; while moral precepts, conveyed in simple and affecting music, would make a profound impression on young hearts. Let us give, wherever we can, a kind of substance to ideas, and a kind of action to sentiment ; hence the importance of historical examples of filial piety. I would quote to children several good men celebrated for their attachment to their parents. He who was the first of the Greeks, if virtue regulates the rank of mankind, I mean Epaminondas, said that the greatest joy which the victory of Leuctra gave him was that his father and mother were alive to hear of it. He repeated this, says Plutarch, more than once, and may thus be considered as affording a kind of practical illustration of the connexion between filial affection and love of country. The day after this famous victory, he was observed to be gloomy, pensive, and negligent in attire ; a circumstance the more remarkable on account of his habitual cheerfulness and attention to neatness, along with great simplicity in dress. His friends, observing this sudden change, asked if any thing had happened to distress him ; “ No,” he replied, “ but I felt that yesterday I was unduly elevated

with my victory; I correct that feeling to-day because it went too far."

I shall next mention the example of Sertorius, who bore so much affection to his country after she had exiled him that, when at the head of a victorious army, he wrote to Metellus and Pompey, his opponents, that he was ready to lay down his arms, and to live in Rome as a private citizen, provided he were recalled by an edict. He preferred, he said, being the last citizen of his country to being called master by the rest of the world: a feeling certainly very different from that of the restless Cæsar, who is said to have declared that he preferred being foremost in a village to being second at Rome. One of the chief reasons, says Plutarch, for which Sertorius was desirous to be called home, was his affection for his mother, with whom only he had been brought up, having lost his father early. When his friends in Spain invited him to come thither, and put himself at their head, he complied with their request, but learned some time after that his mother was dead, on which his grief was so great that his friends were apprehensive of the worst consequences. He is said to have remained, during a whole week, stretched on the ground, and in tears, without giving the watch-word to his soldiers, and without admitting any one of his friends to his presence. At last the senior

officers came to his tent, and used such urgency in the shape both of entreaty and remonstrance, as to prevail on him to come out and speak to the soldiers.

If the actions of worthy characters are useful as excitements to virtue, those of the wicked are not less so in deterring us from vice. A striking effect can be produced only by contrast: the beauty of a landscape is redoubled by the horror of a precipice. Do not fail therefore to quote to children traits of filial perfidy; speak to them of Nero, who caused his mother to be put to death, and represent that monster, when at the summit of human power, complaining, night and day, that the furies were tearing him asunder. Exhibit him devoured by remorse, and seeking to stifle it by vain expiations; an object of contempt and grief, notwithstanding the congratulations of the army, the senate, and the people, who were base enough to express approbation of this atrocious action:—delineate him as perishing at last an object of the execration of this corrupt people who had flattered him in his power, and of the execration of posterity who never flatter.

Had I to educate children for a solitary life in an uninhabited island, I should speak to them neither of error nor of vice. In the bosom of ignorance and innocence they would be virtuous and happy without any effort, but the case is very

more directness in their conduct. This leads us to speak of a very unpleasant and very trying situation in domestic life. A child may have parents who are ill-natured, harsh, and even cruel: how can he be made to love what in its nature is odious? This is a case that calls for all the energy of the language of virtue, and for bringing to his recollection the pain which he himself has given to his parents by his wants, his caprices, and perhaps by fits of ill-health. There are not wanting examples of children who have reformed ill-disposed parents by dint of mildness and patience. Several of this description are said to have occurred in the history of China; owing probably to the attention of that government in rewarding examples of filial affection. Impress on your pupil likewise the great truth that Providence comes to the aid of those whom society abandons, and that God adopts destitute children. You will find in history many examples of children neglected by their parents, who have become illustrious men.

It is easy to trace a course for man when he is between two vices, or between a virtue and a vice; but the case is very different when the doubt is in regard to one of two virtues. If a child has an unnatural father, he should fly from his presence rather than offend him; the harshness of the father cannot justify the son's ingratitude.

But if he must make a choice between his attachment to his parents, and his attachment to his country, in what manner is he to decide? If his father enters into a conspiracy against the existing government, shall he step forward to denounce him? Shall he coldly see his country on the brink of a precipice, or shall he be instrumental in causing the death of him from whom he has received life? Here we shall be referred to the conduct of Brutus, who punished capitally his two sons for betraying their country. But the case I have supposed is somewhat different, and relates to the duty of children relatively to a parent, who acts criminally towards their native land. Had Tatius and Tiberius, the sons of Brutus, been entrusted with the consulship, and had their father entered into a conspiracy in favour of Tarquin, would it have been incumbent on them to have condemned him to death? I answer, "No." We owe more, you will say, to our country than to our family: true, but you owe more to the human race at large than to your country; and the rights of humanity are the rights of Nature. It is for a free enjoyment of these that a country is constituted, and you would upset the foundation of social order by making filial duties subordinate to those of patriotism: this would be cutting the root of a tree for the sake of preserving the trunk. It is not lawful for us

to extinguish one virtue by another, nor to punish one crime by committing a second. If a son has the misfortune to have a father who acts a perfidious part towards his sovereign, it is incumbent on him to do all he can to prevent the success of his projects; but if he fail, the law itself ought to refuse to admit him, not merely as a judge, but as a witness. Moreover, love of country proceeds from love to our fathers; and if I deliver up even my nearest relations when they act an improper part towards my country, I might be equally justified in delivering up my country when she should act an improper part towards mankind at large, of whom in fact she is but a family. Such a principle, it is clear, might lead to the most dreadful consequences.

All political virtue is founded on moral virtue; and it would be sapping the foundation laid by Nature herself were we, under any pretext, to destroy filial affection. The Romans, whose principles are sometimes over-rated, were of the same opinion, for many of their great men blamed the cruel justice of Brutus. His sons, no doubt, deserved punishment, but their father ought to have declined acting the part of their judge. Plutarch says that his austere habits had not been softened by the effects of reason, and he compared him to a sword of too keen an edge. But be the conduct of Brutus as it may, even the Romans must

have seen with horror sons come forward to denounce their fathers, as occasionally took place at the time of the proscriptions. Observe how highly filial affection was honoured in the virtuous days of the republic. A man was condemned to die the lingering death of hunger in prison ; his crime we must suppose to have been very serious ; but his daughter finds means to get into his dungeon, and to keep in the spark of life by nourishing him with her own milk. The senate, when apprized of this action, passed an order that the father should be restored to the daughter, and that a temple should be raised to filial piety on the spot where the prison stood.

We are not by any means to conclude, from what I have said, that we are enjoined to love our children more than our country ; so far from that we should prefer our country, on all occasions, to our family and to ourselves. But it is for the sake of our country that we ought to love our relations. How is it possible that we should be faithful to her if we fail in duty to those to whom we are indebted for existence ? Again, it may be asked, what shall a son do if he meet his father with arms in his hands among the enemies of his country ? Epaminondas said that if we see one who is only a friend in such a situation, it is incumbent on us to turn aside the lance from his breast ; and it surely needs no argument to pre-

vent a son from directing his against his father. Let us die, if necessary, for the safety of our country, but let us live for the comfort of our parents. Be assured that it is only by living virtuously for them that we shall be worthy to die generously for her.

The opposition experienced by virtue is not always confined to our passions; a virtue of one kind may find itself in collision with another, particularly in civil dissensions. Justice and the interest of the public are often demanded by two opposing parties; how then is a citizen to act? I know only one method—that of keeping, as much as possible, a fair medium; for all virtue lies in a medium. The laws of Nature are sufficiently precise, but we are often embarrassed in their application. No doubt it is a wise prayer, and one well adapted to our wants, which teaches us to beseech God that we may not be exposed to temptation. If you want advice, says Juvenal, in regard to the objects of your wishes, my recommendation is to leave the whole in the hands of Providence. God knows better than man what is suitable to man, and man is dearer to him than to himself.

The names of children have often an influence on their characters; hence the propriety of giving them the surnames of virtuous men. Not that they ought to be allowed to despise the names of

their parents ; for the example of Cicero may be quoted in support of a very opposite feeling. His name being derived from the Latin *cicer*, signifying a vetch, he was advised to change it: he replied, “ No, but I will make it so celebrated that it shall be an honour to bear it.” It has however been very good policy in the modern inhabitants of Rome to give to children, and to the days of the year, the names of saints canonized by the church. These names recall the remembrance of every virtue, and have more influence on behaviour and conduct than may at first be imagined.

KNOWLEDGE OF CHILDREN.

Popular Notions in an early Stage of Society.

I REMEMBER that in my childhood I had singular fancies in regard to the sun and firmament. I shall mention them plainly as they existed, because they may be applicable to the history of the human mind, and because the first systems of nations often owe their origin to the ideas of children. I had a notion, suggested by ocular observation, that the sun rose behind a mountain and retired at night into the sea ; that the firmament was a vault which came downwards to the horizon, so that I imagined that if ever I came to its boundary, I should be obliged to bend my body in order to find my way through. Nay, I one day set out on an intended excursion to the extremity of the horizon ; after walking several miles, and seeing it always at the same distance from me, I concluded that the desired object was too far off ; but I remained under the belief of its form being as I imagined, and conceived that if I did not succeed in reaching it, it was only from inability to walk the distance. The view of the sky at night suggested to me a notion that the

firmament contained a number of small holes, through which rain fell on the earth, as through a sieve, and that the stars illuminated a path for God, whom I imagined to come forth during night. This last idea was not altogether a childish one.

The Greeks, famous as they are, and the founders of various sciences, had hardly sounder notions in regard to nature. They imagined, in the early part of their history, that the sun rose at Delos, one of the Cyclades, and that he sunk every night into the sea. The first advocates of this opinion were probably Peloponnesian Greeks, and perhaps Arcadians, who are reputed to have been the earliest settlers in that peninsula, as they boasted that their forefathers were *αυτοχθόνες*, and had risen from the earth before the moon was called into existence. Delos, relatively to them, was in the east, for it is one of the most eastern of the Cyclades. As they saw the sun rise every morning above Delos, they naturally concluded that he sprung from that island; and as all to the westward of the Peloponnesus was sea, they imagined that he went to rest in the arms of Thetis. They gave moreover to the sun, to perform his journey, a car, horses, a bow, and arrows; equipping him like one of their own warriors. One fiction soon engenders another; no sooner was it believed that Delos had given birth

to the sun, the god of day, than the same birth-place was assigned to his sister, the ruler of the night. In progress of time every island or mountain became the birth-place of a deity; Venus being said to have seen the light in Cythera; Mercury in Arcadia; and Jupiter himself on mount Ida.

The case was similar with other nations: each made the sun rise and set in their country, and each had gods of his own. It would be endless to enumerate the long list of disorders in morals, and of wars engendered by fallacious notions of theology, and even of natural philosophy. Most men have owed their early connexion to commercial relations of some kind or other, and their knowledge has been the consequence of this association. They saw the course of the planets around the sun, and concluded at last that he enlightened other worlds; that he was immovable; and, finally, that it was the earth that turned round him on her own axis. They were next led to conclude that the case was the same with the other planets which received their light from him. Other sciences have, in like manner, been improved only by a collection and comparison of the observations of different men. This truth is of high importance; it shows that Nature makes the knowledge as well as the comfort of men dependant on their union, and that a youth

should be educated, not merely for his country, but for human nature.

Leave children then for a time under the impression that the extremity of the horizon is not beyond their reach ; and let them owe the correction of their error to experience, that they may have a due sense of their obligations to their instructors, and to those who have preceded them in their career of inquiry. You will thus give them a conviction of their weakness, and you will fortify them against the presumptuousness attendant on knowledge when it is acquired ; because they will be sensible that, although they possess knowledge, the honour of it does not belong to them, so much as to those from whom they received it. Were a man of letters obliged to restore each portion of his knowledge to the quarter whence he received it, how much would remain in his possession ? Let us at least preserve to our children modesty, that natural companion of weakness, and, I may add, of extensive knowledge, because those who see the immensity of nature better than other men are more fully impressed with a consciousness of their own deficiency.

It is not necessary to begin making children astronomers before we teach them the course of the sun ; they will easily discover its principal points by turning themselves towards him at

noon, at which hour they have the east on their left, the west at their right, and the north at their back. His dawn, his noon, and his setting, will give them an idea of the leading distinctions of the day, and, by analogy, of the year with its seasons, of life with its different periods; for a single day is an image of life.

Let us choose this day in the infancy of the year, even in the month of January: let us observe the sun at the coming forth of the dawn; the clearness attendant on his approach is perceived in the sky before he becomes visible himself, and produces what we call twilight, which is the effect of the refraction of his light in the air condensed by cold. We ought rather to call it an effect of Providence which thus prolongs to us in winter the benefits of the warmth and light of the sun at his rising and setting, in proportion to the length of the nights; for the twilight is longer in the season of short days. Although the sun appears of great size at dawn, it is with difficulty we can distinguish him through the vapours of the atmosphere; his discoloured rays shedding only some yellow tints over a lead-coloured sky, and over hoar-coloured hills. Rivulets, frozen and buried under snow, are no longer distinguished from meadows; or rather there are no longer either meadows or rivulets; a gloomy uniformity is spread over the earth; all

presents the aspect of death. Trees, bare of leaves, and covered along their branches with hoar frost, look as barren as thistles; no birds come forth to hail with songs a morn announcing only the gloom of nature; but flocks of crows are seen traversing the air, and are heard to mix their doleful cry with the howling of the winds which shake the forests. They draw near to cities, and spread themselves, like a gloomy mantle, over the snow-covered lay-stalls, where they feed on the bodies of animals who have perished from the severity of the weather. On the other hand, thick clouds of smoke are seen to proceed from cottage chimneys, and give notice of the rising of the labourer. The feeble wren and the timid red-breast, pressed by hunger, venture to enter his habitation, and come to ask there a portion of the gifts scattered by Nature during summer along the surface of the earth, and stored by men alone.

Man, without wings, without plumage, devoid in short of all natural covering, would be more wretched in such a climate as ours in winter, than the carnivorous crow or the feeble wren, had not Providence put in his hands the command of fire. What a lamentable spectacle does he present in his natural state. Behold a naked creature, abandoned by Nature to the rigour of the elements; who, at his birth, is so helpless as to

be obliged to learn from others to walk and even to eat; who, alone among animals, wants the instinctive knowledge of the vegetable products which support life. Contemplate him when grown up in a savage state, and you will find a creature goaded by blind passion, perpetually at war with his fellow men, although dependant on them; persecuting and suffering persecution; murdering, and ending his days by being murdered himself. Turn now to the other side of the picture, and behold a being whom Nature has placed, by means of his wants and his enjoyments, in an amicable connexion with his fellow creatures throughout the world, and to whom she has entrusted fire, that prime mover of the universe. With the aid of that element, man breathes in every climate, navigates every sea, inhabits every part of the globe, turns all vegetable products to his service, and tames every useful animal. You now behold him in a civilized state, with beauty displayed in his shape; mild affection in his countenance; the innate sentiment of the Divinity in his heart; a comprehension of the works of Nature in his mind; an instinct of infinity and immortality in his hopes; while, by a combination of knowledge and virtue, he has rendered himself master of the earth, and now directs his eyes to heaven.

There are some animals who live surrounded by

the splendour of the sun, while others, like the bee and ant, pursue their labours in obscurity. Birds of prey seem to have telescopic, and insects to have microscopic eyes; at all events it is certain that objects have not the same size in the eyes of both. The sight of man holds, like his other organs, an harmonic medium between animals; but with the aid of fire he procures whatever degree of light and heat he desires, and it may be almost said that he thus finds means to deliver himself from the inconvenience of night and of winter.

There is little difficulty in conceiving how man made the discovery of fire, Nature having laid it before his eyes in a variety of ways; in the burning of forest trees struck with lightning; in the fermentation of vegetables, as we see in smoking dung-hills; and in the fire of volcanoes, which proceed, not from an accumulation of sulphur, but from a fermenting process in the neighbourhood of the sea. The power of using fire belongs only to a rational being, and forms a very marked boundary between man and animals. The most illiterate savage knows how to strike fire; while the most acute of animals, whether we look to the elephant, the monkey, or the beaver, have no idea of it: nay a monkey, even when domesticated, and fond of the warmth of a fire, has no idea of bringing fresh fuel to prevent its going

out. It would be endless to enter on an enumeration of those arts and manufactures in which the agency of fire is requisite ; it would be hardly possible to find one in which it does not enter directly or indirectly. Even in the torrid zone, man would be helpless without the aid of fire : he could neither procure tools for husbandry, nor clear the forests for cultivation : he could not prepare wood for the erection of his cabin, and hardly a club to defend himself against a wild beast. The sight of fire, during the night, is one of the most effectual means of deterring them from approaching a human habitation, and must have been a principal instrument in accomplishing the triumph of man over these primitive lords of the forest. Considering all things, we may say that fire is the life of human society, as the sun is the life of the universe.

But it is not in an insulated or solitary state that we ought to consider man ; it should be in the society of his equals, and in those vast assemblies which we call nations. The different governments which he has invented to protect himself from the irregularities of his fellow creatures, and to enforce the practice of justice and virtue, have a title to be treated at great length, but they have so often engaged the reflections of philosophers, that I shall allot to them only a few pages. I shall next return to

a delineation of those sentiments which constitute the true strength of man, because he derives them from heaven, and because it is by their aid that he elevates his mind to heaven, the true object of his hopes.

Philosophers have said a great deal on the barbarism of nations in a primitive state ; but I cannot help thinking that barbarism is not natural to man, and that it is often nothing more than a re-action of the evil which a nation in its infancy experiences from its enemies. Such evils are more severely felt, and inspire a more vindictive spirit, because in such an age the constitution of a state is more easily overturned. It is thus that the petty tribes of savages in the new world devour their prisoners, although the families of the same tribe live among each other without any kind of violence. It is for a similar reason that feeble animals are more vindictive than the large and powerful. The bee thrusts his sting into the hand that approaches his hive, but the elephant sees the arrow of the huntsman pass him without turning from his way. It may sometimes happen that barbarism is introduced into a rising society by individuals who join it as accessaries. Such was, in the beginning, that of the Roman people, formed as that people partly was out of freebooters assembled by Romulus, and who began to be civilized only under Numa. At other times,

barbarism is communicated, like an epidemic infection, to a people already civilized, by mere intercourse with its neighbours. Such was the case of the Jews, who, notwithstanding the severe prohibition in their laws, adopted, from the inhabitants of Canaan, the cruel custom of sacrificing children to idols. Its introduction, however, generally takes place through the tyrannic sway of a despot, such as Lycaon was in Arcadia, or through the influence of an aristocratic body, who perpetuate it, for the sake of maintaining their authority, even unto an age of civilization. Such, in our days, are the violent religious prejudices inspired by Brahmins into the mild Hindoo ; such also are the impressions inspired by the aristocracy into the Japanese.

I repeat, for the comfort of mankind, that moral evil is as foreign to them as physical evil ; both arise out of deviations from the laws of Nature. Nature made man good ; had she made him mischievous, she, who is so methodical in all her works, would have provided him with claws, with poison, with a devouring mouth, or with some of those offensive arms, which she has given to beasts whose destiny it is to act a ferocious part. Not only has she confined his arms to means of defence, but she has created him the most naked and helpless of animals, with the view, no doubt, of obliging him to have incessant

recourse to the humanity of his equals, and to behave with sympathy towards them. It is to the dependant state of man that we are to look for the origin of every virtue. Nature does not constitute entire nations of jealous, envious, cruel, or malignant characters, any more than she constitutes them of sick, lame, or blind. If you happen to meet an individual labouring under disease, you will, in general, be safe in ascribing it to the use of unhealthy diet, or to his breathing a putrid air. In like manner, when you discover barbarism among a primitive people, attribute it to the errors of its political situation, or to the influence of its neighbours, in the same way as you account for the bad habits of a child by the effects of bad example, or by faults in its education.

A tree bears a resemblance to its branches, and a branch to its tree; in like manner, the course of the life of a people resembles that of a single man. We may thus establish an analogy between the four ages of human life, and the four principal periods of the history of a nation, so as to deduce inferences which will not be without their application to the improvement of mankind.

A child remains long in a state of weakness. What a number of falls does he meet with before acquiring the ability of keeping himself erect and of walking! How many bruises before dis-

tinguishing a hard from a soft body? To teach him the difference between a thorn and a rose, it is generally necessary that he should be pricked by the former; to impress on him a recollection of the right path, it is necessary that he should have strayed from it. He acquires experience only by disappointments, and knowledge only by committing mistakes; for his reason may be said to meet with as many falls as his body. He clips all the words of his language before acquiring speech, and when the first ray of light begins to dawn on his mind, how many prejudices does he adopt for truths? He is accustomed to form himself in almost every respect on the example of others, weeping on seeing them weep, and laughing on seeing them laugh. Principle is thus formed on prejudice, and manner on habits. Anticipated in all his wants by his mother, a child sees in her for a long time nothing but a female appointed to provide him with nourishment, and to carry him about on her back or in her arms. A stranger to innumerable evils which threaten his frail existence, he has never reflected on the inquietudes of maternal love, nor felt the obligations of filial affection. On the other hand, his mother, not always able to guide him by the light of reason, often subjugates him by the sentiment of fear, and has recourse to the improper expedient of telling him tales of fairies,

spirits, and goblins. Nothing is so credulous as a child ; for having every thing to fear in consequence of his weakness, he believes every thing which excites fear ; he has no conception of evil but in bodily pain, nor of good but in bodily pleasure ? Hurried away by the impressions made on his senses by new objects, his feelings undergo variation every instant. He is fond of whatever is dazzling or noisy ; he runs after a butterfly, and tries to climb the tree where he hears the song of a bird. He will give away his clothes for a bauble, and he will quit to-morrow the bauble which absorbs all his attention to-day. Eager to obtain whatever he does not possess, he despises whatever he has at his command. He takes without scruple whatever suits him, and gives away without thought what is often very necessary to his wants. Without pride as without modesty, he admits indiscriminately to play with him the child of the shepherd and the child of the nobleman. Confiding, generous, gay, always in motion, and unconscious of any happiness but that of liberty, his attachments succeed each other as rapidly as his dislikes ; his pleasures as his chagrins, and his projects as his reflections.

Such is man in an uncivilized state. Unacquainted with most of the useful arts, he often fights like a child with stones and clubs. His language, barren as his reason, contains only a

few words, and expresses but a small number of ideas. He is an animal unacquainted with any other superiority than that of strength, and with any other wants than those of Nature. Despising whatever is weaker than himself, he oppresses, often without being conscious of tyranny, the partner of his lot ; obliging his wife to cultivate his field, to reap his maize, and to prepare his repasts. In his long and frequent excursions, he loads her with his provisions, his children, and his domestic equipage. But, by a just retribution, he is oppressed in his turn by religious terrors ; for religion, being all over the world the natural refuge of the unfortunate, is dreadful to tyrants in proportion as the latter exercise severity over females. It is women who, by their weakness and their number, give a formidable power to all popular superstitions. If they collect before a rock of strange hue, and lean their bodies towards it, men are soon found leaning and even prostrating themselves before this strange object of supplication. It is thus that, in the Island of Iona, the ancient seat of religion in the Hebrides, the chiefs among the Scotch highlanders were accustomed to take an oath, trembling, between two black stones ; an oath without which their savage neighbours would not have trusted their declarations. It was thus that, in our ages of barbarism, Louis XI. who infringed without

scruple the laws of humanity, was afraid to perjure himself on the cross of St. Louis. The superstitions of tyrants take their origin in the bosom of the unhappy, who act as does a nurse in terrifying her youthful charge. Man, in an uncivilized state, is more moved by objects that strike his senses with surprise, than by those that are addressed to his reason ; hence his attachment to splendid ceremonials, and a reverence which is the greater, the less he comprehends their object. Like a child, he imitates whatever he sees, covering himself, when he can, with the shirt of a European, equipping himself with a stranger's wig, and, after having strutted about in these ornamental dresses, suspending them like a manitoo, or idol, on a neighbouring tree. Like a child, he covets whatever he sees, and lavishes whatever he possesses, giving up the produce of his toilsome chase for a bell, or for a few grains of glass. Devoid of foresight, he surrenders in autumn the land which he ought to sow in the succeeding spring, and he gives away, as a present in the morning, the bed which he will stand in need of at night. Looking on all men as equal, he presents his pipe to a sailor as to an admiral, and if he admits any distinction between them, it is the distinction of age. Gay, open, generous, and always in a course of wandering, he knows no

happiness but liberty ; a savage is little else than a child grown up.

Such were originally most European nations, and such in the present day are the native tribes of America.

From the time that a youth attains the age of puberty, his shape begins to acquire its set ; his features are marked by characteristic traits ; his voice changes its tone, and gets strength ; his eyes, though still kept down by the timidity of boyhood, begin to display the first fires of youth. This age is the dawn of life: it is then that a new light removes the clouds of ignorance. In the state of Nature, a youth is early accustomed to provide for his wants ; he harpoons the fish at the bottom of the water ; reaches the flying bird with his arrow, and overtakes the deer in the chase. Desires, hitherto unknown, now begin to agitate him. Till now the society of a friend sufficed to calm his disquietude ; but the time is come when he feels the want of a heart which may correspond more completely with his own, and he soon finds his second half in a female. Until then he had seen in a young girl only a being of less strength than himself ; he now feels, in her whom he loves, a power superior to his own : she enlightens his mind by conquering it, and redoubles its strength by rendering it

subservient to her will ; she becomes the means of inspiring him with virtues to which he was a stranger. To please her he sings, he makes verses, he improves himself in industry, he attends to domestic arrangements, and to the duties of a husband, a father, and a citizen. In his unquiet ardour, he looks around at Nature, and feels in every part of Nature a potent being, whose works bear the marks of that kindness by which he now finds himself actuated. His heart becomes gradually disengaged from the prejudices of infancy and the terrors of superstition ; his religion is confiding and sublime ; it is love which has made him a man. Love makes all the fire of heroism run in his veins. He is ready to shed his blood for a country which holds him by such tender ties ; nay, if the object whom he loves commands it, he would expose his life in the most hazardous attempts. Oh ! Pelopidas, you gave Thebes only sacred victims to her country in a battalion of friends ;—in a battalion of lovers, you would have found heroes who would have extended her empire afar.

Such is the condition of a people in passing from a barbarous to a civilized state. They first improve the useful arts, and next invent those that are agreeable. Women in this stage of society begin to give more power to their charms, and succeed in throwing off that yoke of domestic

oppression, in which they were kept by the law of the strongest. Manners become gradually milder; associations are formed for the purpose of repressing injustice, particularly such as is committed against the fair sex. Religion, stripped of the terrors of barbarism, assumes elevation and majesty. Soon are displayed all the arts which give love its empire, and which receive from it their perfection in return;—music, poetry, painting, sculpture, architecture, dramatic representation. Females are the subject and the object of public entertainments, taking precedence at plays, dances, tournaments, and military exercises. That military parade, which would frighten them in combats, delights them when in sport, and their applause redoubles the ardour of the combatants. To acquire the esteem of the females, every citizen desires to become a soldier; the art of war becomes improved; a nation feels its strength, and is soon inflamed with a desire of conquest. It is then that a state has all the energy of youth and heroism; the age of love is the age of glory.

Such was the progress of several states of Greece, until the age of Alexander; of Rome, where, according to Ovid, Venus had more temples than in any other part of the world, until the age of Augustus; and of France, from Francis I. until Louis XIV.

Now comes middle age ; the fire of passion is calmed ; man, formed by the experience of the past, employs himself with a view to the future. His principal object is now to acquire property, for he feels that money is more useful to him than glory. He quits what is agreeable for what is useful, and prefers convenience to magnificence. He now conceives projects of trade or of agriculture and seeks to form such advantageous alliances as may establish his family ; he is no longer the lover of his wife, but he is her husband ; his love is changed into esteem ; his religion has become purer, and he is less captivated with its ceremonial than with its spirit ; his virtues, now more solid, are cultivated without ostentation, for the benefit of his equals. Middle age is the æra of strength and reason.

Such is the state of a people in the last period of civilization. The age of philosophy succeeds that of the fine arts : we feel less, but we reason better ; all is subjected to the process of analysis. Arts addressed to our taste decline, but useful arts are improved. The appropriation of the inside of our dwellings, the shape of our furniture, the police of towns, agriculture, commerce, navigation, all the arts, and all sciences, having political inquiries for their object, make a rapid progress. Every citizen feels his individual welfare dependant on that of the public ; the different

conditions of societies approximate to each other. Population receives a visible increase ; the state sends forth colonies ; at home the fair sex are rather our habitual companions than objects of ardent admiration. Religion directs her views more clearly to the comfort of man, and gains in kind offices what she loses in pomp of ceremonial. Military fame is in less repute, while the credit attached to property increases. A useful peace is preferred to glorious war ; repose is more welcome from the agitation of the preceding ages ; nay misfortune often accelerates the change from war to peace, like the worm which enters a fruit and quickens the time of its ripening ; or like those long-continued disappointments, which, if they do not prove fatal to a young man, accelerate the maturity of his judgment by depriving him of the means of indulging in pleasure.

Such is now the character of England, Holland, and Switzerland, after they had long groaned under the yoke of their respective tyrants : such begins also to be the character of France, in consequence of the lapse of ages, and the improvement of our government. To throw obstacles in the way of our political maturity would be to prevent a flower from coming into fruit, or a child from growing up into a man. It would be like attempting to contain all the sap of a tree in its trunk, and to bring about in a state those

revolutions which destroyed the chief republics of Greece, as well as the Roman empire.

At last arrives old age, which leaves to man no other want than the desire of rest and of peaceable enjoyment. He provides himself with a variety of accommodations, and as these can be got by means of money only, his ambition degenerates into avarice ; he becomes sedentary, and as he sees nothing but his end in the future, he turns his thoughts aside from it, and throws them back to the past. He recalls with transport the age of his infancy ; his early habits revive in his recollection. Like a child, he feels inclined to superstition, and is more moved at the ceremonial of religion than affected by its spirit. His wife is now rather an object of respect than of love ; he surrounds her with etiquette, and seeks to regulate both himself and his family, by the authority of custom. Hence the preference that he is apt to give to ancient error over a useful innovation. At the same time, though age weakens his constitution, he counteracts its ravages in a great measure by the regularity of his diet, and by avoiding whatever is likely to shake his strength. The absence of tumultuous passion gives additional liberty to his mind, and enables him to calculate with prudence both his own arrangements, and those of others. As his weakness makes him attentive to whatever is likely to injure

him, he anticipates such events, and knows by long experience how to profit by them. It is to the man of mature years that it belongs to govern the members of a numerous family.

Such is the character of an empire which has passed its meridian ; it thinks only of continuing in peace, and of attracting to itself the money and trade of other countries. Thus, though despotic in its nature, it is tolerant from interest. It cultivates the arts of luxury, in preference to the useful arts. It is customary in such a country to dwell with praise on the times that are past ; to attach more value to an old medal than to a recent invention ; to the founders than to the actual rulers of the country. Ancient pomp is re-established ; the proceedings of government are regulated by a ceremonial which extends its influence even to the interior of families. The military spirit is weakened, but the political spirit acquires additional force. If it is exposed to foreign invasion, it seeks to repel it rather by negotiation than by arms ; it throws back among its enemies that discord which they prepare for it, and, if at last it succumbs under military force, it ends by conquering its conquerors. Such in my opinion is the condition of China.

This comparison of the four ages of national history with the four ages of human life, seems to me the more applicable, as many savage tribes

are believed to perish before attaining the rank and consistency of a nation, in the way that a number of children die before growing up to manhood. Such is said to have been the lot of several tribes in America and in Tartary. Others like imprudent youths, destroy themselves in the vigour of age by an abuse of their own strength. Such was the empire of Alexander ; which did not even attain what I have termed middle age. In some the transition from the vigour of youth to a state of decline is rapid ; as was, in a certain degree, the case of the Roman empire. Luxury introduced from Asia was a principal cause of this decay. Finally, there are states which are overturned in consequence of a bad constitution, before going through any of these periods, as was the case with Poland, and with some other countries which pass too suddenly from one stage of civilization to another. Somewhat of this sudden transition took place, perhaps, in the case of Russia, in consequence of the alterations introduced by Peter the Great.

These sketches sufficiently show that the primitive character of a nation, as of a man, is often altered by intercourse with its neighbours. It is thus that the introduction of French manners has accelerated the maturity of the nations of the north. On the other hand, the barbarism of the ancient tribes of the north who invaded the south

of Europe on different occasions, was long the cause of delaying our civilization. At present our influence is become more extensive there than that of any other people, owing, in a great measure, to the attraction of our language and our literature. It is by the immortal works of our learned men, that French has become so generally adopted throughout the courts of Europe, and it is in a great measure by the mild philanthropy inspired by these writings that the nations of this quarter of the world are becoming more and more linked with each other.

Nature extracts harmonics from apparent contradictions; she makes a contrast in the vast body of mankind between the ages of nations, in the same way as she establishes a difference in the same family between the ages of its different members. Children, youths, middle aged and old men, are here all classed together, that strength may be of use to weakness, and experience to ignorance. Some philosophic reasoners imagine that she has conferred a distinct character on each of the four great divisions of the globe. To America she has given, according to them, an infantine character, rendering its temperature in general mild and humid. Though a great part of its territory lies within the torrid zone, it is greatly refreshed by the height of the soil, by the shade of the largest forests in the

world, and, what is of more consequence, by a long chain of icy mountains, whence proceed the largest rivers in our globe. Nature has provided for the simple wants of the inhabitants of the western hemisphere by vegetable productions which require little preparation. She has put their nourishment in the earth safe from birds and from hurricanes, in the roots of the manioc and the yam ; their clothing on the cotton plant, a shrub which is covered with a fleece like a sheep ; their furniture in the branches of the calabash, which bear fruit in the form of gourds, out of which vases of any kind may be made. She has provided the simple natives of the western hemisphere with lodging under the immense arbours of the Indian fig-tree, and of other stately trees of the forest. In that country we seldom meet with wild beasts who are dangerous to man ; the woods contain troops of monkeys occupied in innocent sport ; while the birds delight the eye by their lively colour, or the ear by their pleasant warbling. Such is the climate, and such are the animals of most common occurrence, in Mexico, Peru, Brazil, Guyana, Terra Firma, and the innumerable islands which lie adjacent to their shores. These vast and peaceful tracts remind me of the infancy of the world ; and were a poet or a painter to represent one of its inhabitants in a state of love, he might form a pleasing picture

by delineating him dressed in feathers, extended on a cotton hammock suspended from plaintains, and waited on by his mistress, who might be introduced as presenting him with a calabash full of delicious fruits.

The ardent character of youth might be considered as belonging to the burning Africa.— That part of the world is crossed by a long zone of sand which greatly increases the solar heat. Its inflamed atmosphere dyes its inhabitants with black, and is refreshed only by hurricanes and thunder. The earth here bears a number of fruits peculiar to this quarter of the world, such as the date; and those which it has in common with Europe, such as the apricot, the pomegranate, the fig, the grape, the olive, attain a larger size than in any other part of the world. Who has not heard of the fertility of Egypt?— Africa gives in many of its regions two crops a-year; yet its fertile soil is in a great measure rendered useless by the prevalence of wild beasts. In that country lovers dare not appoint to meet in groves, which often serve for the haunt of the rhinoceros, the perfidious tiger, the ferocious buffalo, or the angry lion: travellers do not venture to cross, except in numerous caravans, its profound solitudes, the echoes of which repeat in all directions the howlings of animals after their prey. The shepherd, armed day and night for

the defence of his flock, accustoms himself to merciless war. Vindictive passions exist among the Africans in as implacable a shape as in the breast of Achilles; and whole tribes take up arms, less in the hope of conquest or even of spoil, than to inflict injury on each other, or to lead their prisoners into lasting captivity.

Approach the borders of the Mediterranean, and observe the contrast between our tranquil and commercial towns, such as Cadiz or Leghorn, and Tunis, Algiers, and the other nests of pirates who prey incessantly on the commerce of Europe. War, revolutions, and slavery would long ago have thinned the population of these countries, were they not highly favoured in soil and climate. The treatment, however, of their women bears all the marks of a savage state. The Moor makes his wife his slave, and sometimes his victim. He courts his mistress, not with tender language, but with menaces. Africa may thus be compared in various respects to the wild untutored character of youth.

Europe, on the other hand, will be found to bear a resemblance to the character of middle age. In point of climate, she has neither the moisture of America, nor the burning heat of Africa; her fields are sufficiently irrigated, although the culture of vegetable products demands here a larger share of care and attention,

than in the other quarters of the globe. Here fruit-trees require to be pruned and grafted, the ground to be manured and levelled with the plough, and bread demands a degree of preparation which makes it considerably more costly than the ordinary articles of food in warm countries. It is in Europe that the industry of man appears in all its vigour, and that the face of the country is covered with mills, manufactories, and populous towns. The mind of man finds its strength increase in proportion to the difficulties opposed to its progress. In Europe, forests are not destined to fall unprofitably by fire; the axe of the ship-builder shapes them into vessels destined to navigate every sea. Sciences, arts agreeable and useful, and particularly those tending to the augmentation of political power, such as navigation and tactics, are cultivated there with the greatest success. To what else than to progress in knowledge is this comparatively small part of the world indebted for the preponderance which it has acquired over the rest? It has subjugated America, established impregnable fortresses in Asia and Africa; and is the only part of the world where separate powers connect themselves by treaty, and seem all to be members of a single family. Happy did not her intolerant laws, and particularly the ambitious disposition of her people, arm them frequently one against

the other, and create divisions which political treaties are not able to reconcile. It is in Europe that women have displayed an influence that has conduced to the relinquishment of old habits, and has substituted the reign of politeness for that of barbarism. The laws of the ancient Celts delivered a female to her husband like a slave ; the Christian religion presents her as his companion.

Asia, the first peopled of the four quarters of the globe, may likewise be said to be marked by the traits of advanced years. She unites the advantages of the three other quarters by the varieties of her climate ; Cochin-china and Siam being as moist as America ; Hindostan as warm as Africa ; Persia, and a part of Tartary, as temperate as Europe. In many parts of Asia the soil is elevated, the sky clear, the air pure and dry. Nature has collected there that wealth which in other parts lies in a scattered state ; and she seems to have put, in the productions of each kingdom of Nature, species of a superior quality to those that are found in other countries of the world. The steel of Damascus, the gold and copper of Japan, the pearls of Ormus, the diamonds of Golconda, the rubies of Pegu, the spiceries of the Moluccas, the cotton, muslin, and rich dyes of India, the coffee of Mocha, the tea, the porcelain, and the silks of China, the fleecy goat of Angora, and the richly plumed pheasant

of China ; in short a number of the animals and products which constitute leading objects of European luxury, are produced in Asia. The Greeks and Romans drew from it a variety of the fruit-trees which we cultivate at present. We have exported from it vegetable products which have become the richest objects of culture in our American colonies, such as coffee, indigo and the sugar cane ; we are indebted to it for the silk-worm, which is of so much importance to our manufactures in Europe ; and finally it is from Asia that the first notions of arts, sciences, law, and religion, as well as the first tribes of almost every nation, have proceeded. Nature seems to have reserved the abundance of Asia as a retreat to those who have arrived at the period of enjoying the fruits of long labours. A painter, in drawing an Asiatic in full enjoyment, might represent him as a patriarch with a venerable beard, stretched on a sofa, surrounded by perfumers, and waited on by females sumptuously dressed, respectful, and attentive.

Europeans are accustomed to shave their beards, but the Asiatics wear them at full length. The greatest affront that can be put upon an Asiatic is to deprive him of it, and the most sacred oath that can be required of him is to make him swear by it. The Americans are without beards, and the negro chin is covered only with a kind of

down similar to that which appears in youth in Europe. This singular discrepancy may probably be owing to difference of climate; but there seems a kind of correspondence between the state of the beard and the other features of the countenance. American Indians have in general a narrow forehead, large eyes, a short nose, and unmeaning features, which, with their beardless chin, gives them somewhat of a simple look, African negroes have flat noses, and eyes, the fairness of which forms, like the whiteness of their teeth, a curious contrast with their dark complexion, the rudeness of which is often increased by scars which they inflict upon themselves. The natives of Europe have been at all times well proportioned and comely, as is apparent from the beautiful statues of both sexes left us by Greece. The ancient sculptors seem to me to have exhibited their figures in a state of nudity, and often without a beard; for the sake of displaying all the beauty of the human figure.—The Turks, the Persians, and Hindoos, all wear their beards long, which, with their large foreheads and aquiline noses, gives a particular gravity to their look. Adverting to the prevailing dress in the four quarters of the world, we find the inhabitants of Peru and Mexico plainly clothed in a cotton shirt; those of Zaara, Nigritia, and the lofty regions of mount Atlas, in the skins of wild

beasts ; Europeans in short neat dresses which display the shape of the body ; and the Asiatics in long robes which cover it all the way to the feet.

Let us next advert to their prevailing amusements and manners. The inhabitants of the Oronoko, the Mexicans, and the Peruvians, are passionately fond of sports which give exercise to the body ; among others, playing at ball. The African Moors give a preference to bull-fights, running at the ring, and similar exercises, for which, at least for bull-fights, they introduced a taste into Spain at the time of their conquering that country. Negroes delight, above all things, in loud musick, Europeans in sights that affect the feelings, or exercise the mind ; Asiatics in meetings where there is more silence than conversation ; such as the coffee-houses, where they smoke their pipes for hours, or play at chess, for that game came to us from Asia, in the same way the game called tick-tack from India. Dancing, which is every where characteristic of national disposition, is pantomimic in America ; in Africa, at least among the negroes, it is emblematic of fighting, champions coming often on the boards armed with clubs, and professing to go through all the movements of a conflict. A gentler taste prevails on the borders of the Seine, and throughout Europe ; but as to the Asiatics, this exercise

seems so contrary to the gravity of their character, that they would account themselves dishonoured were they to take a part in it. They consent, however, to be spectators of dancing, particularly when voluptuous; and with this view they are accustomed to introduce dancers into their great festivals, which sometimes last a number of days, as in the time of Ahasuerus. No modest woman however appears in a dance in Asia.—I conclude by remarking that the situation of the women may in general be taken as a good criterion of the state of civilization of a country. They are slaves in Africa, and not much better in America; in Asia, though in less subjection than is commonly imagined, they are not in the habit of associating with our sex, while in Europe they are our daily and hourly companions.

I shall now say a few words of the different forms of government in the different parts of the world. Wherever we go, we shall find the government of mankind divided between military leaders and ecclesiastics. The latter are all powerful among the uncivilized tribes of America. The Mexicans and Peruvians had made some advances towards civilization, and were united in considerable numbers under one sovereign; but their sovereigns, however great their power over their subjects, were themselves under the neces-

sity of paying great attention to the priesthood. In Africa the executive power is not altogether dependant on the ecclesiastical; the negroes, although very superstitious, being accustomed to change their objects of worship even in their native country. When slaves in a foreign country, they sometimes adopt the religion of their masters, and quit it for another without much scruple, as if unacquainted with any other power than that of compulsion, and inclined, consequently, to adopt the religion of the strongest. In Europe, temporal and spiritual power divide the public attention, and superstition has the least influence in the farthest advanced countries. In Asia, these powers are often united in the person of the sovereign, as in the time of the patriarchs. We have there the spectacle of a king and pontiff in one; yet, though the religion of the prince presides invariably over every public operation, other religions are notwithstanding tolerated. In the Mahometan religion, the heads of government call themselves descendants of the prophet. Such is the Grand Seignior in Turkey; the Sophi in Persia; the Great Mogul; the Prince of Mocha; the Emirs among the Arabs; the Scherifs who rule over so many parts of Africa; such were also the ancient Caliphs of Egypt and Bagdad. In the idolatrous religions of Asia, such as prevail in Hindostan, Pegu,

Siam, and Cochin-china, monarchs are in the habit of taking the title of "brother of the sun and moon;" in the religion of China, the emperor makes public sacrifices to the "Spirit of heaven." Other portions of his pontifical character are delegated to his mandarins, and even to fathers of families, who often offer a religious homage to Confucius, and to the spirits of their ancestors. In Japan, where the executive and ecclesiastic powers are vested in distinct persons, the Daïri or ecclesiastical sovereign, has the very important privilege of conferring all titles of honour at the court of the secular ruler: these titles are titles of sanctity, for which large sums are annually paid by the ruling prince. Asiatic governments may accordingly be called Theocratic, the edicts of sovereigns consisting often of a series of moral lessons or exhortations to virtue. In fact the language of laws and public ordinances is in many parts of the world a clue, not only to the form of government, but to the predominant feeling of the people; in America these edicts make mention of the anger of the gods; in Africa, of the anger of kings; in Europe, of the royal pleasure and the interest of the people; in Asia, of the will of Heaven.

Let it not be inferred from the preceding reasoning, that I attribute the good or bad qualities of the people to the climate under which

they live. I have laboured in other writings to refute this error, supported as it has been by too able advocates. What I have said above, even on the different temperatures of each part of the world, will be found to afford a fresh refutation of it. Certain it is that the heats of Africa do not make the negroes effeminate, as is the case with the Hindoos who live under a similar climate: nor do the heats of Bengal give to its gentle occupants any of the disposition of the ferocious moors, or of the negroes of Iaida. Barbarism and luxury are not consequences of climate, but of the particular state in which a nation is placed by moral causes. Barbarism appears among nations soon after their formation, and becomes generally modified and softened in proportion to the progress of time. Luxury, on the other hand, goes on increasing, and exists in the greatest vigour towards the decline of a people. Barbarism arises from the weakness of a recent association governed despotically by a chief, or by a body of aristocrats; and it is always founded on some religious opinion. Luxury, on the other hand, is founded on the gratification of wants real or imaginary, and reminds us, in a people, of those indulgences which we individually require in greater number as years roll over us. But neither barbarism nor luxury are permanently inherent in any people,

because the mere progress of time, with the operation of good laws, is sufficient either to preserve them from, or to rid them of, these evils. I have repeated these words, because all national vice may be directly or indirectly referred to them. War may be considered the result of the barbarism of former ages ; commerce has hitherto been the forerunner of luxury, although there is no necessary connexion between the prosecution of trade and the decline of a nation. In examining different countries, we shall find war and trade predominate in proportion as the inhabitants are more or less advanced in civilization.

Among the American savages war is of very frequent occurrence, and carried on with much cruelty. This is a consequence of the weakness of these petty nations, who always proportion their vengeance to their fears : it is a consequence likewise of the height to which their passions are raised by fanaticism. The first man who ventured to kill a domestic animal for food made a votive offering of the entrails to his gods, by way of expiating what he thought a crime :—hence, we are told, the origin of sacrifices. In like manner, we may suppose that he who first killed one of his fellow men made a vow of the blood to the infernal gods, that they might join him in his vengeance. It is by considerations

like these that we are to account for the ferocity of war in savage countries, such as America.

Savages do not enter into hostility without consulting their manitoo or idol; and he who gives an answer in the name of the object of their adoration never fails to promise success, provided they undertake to furnish some skulls or jaw-bones of their enemies as ornaments to their deity. Hence their barbarous mode of treating their enemies, whose bones they are in the habit of tying to the cottage or sack which contains their manitoo. The Mexicans and Peruvians, people of great mildness and considerably advanced in civilization, were in the habit of offering every year to their gods a number of human victims, and are said to have undertaken war for the purpose of obtaining them. Their brutal priests were in the habit of exclaiming from time to time that their gods required food; on which the superstitious vulgar became ready to take up arms, and to attack their neighbours. The sovereigns of Mexico are said even to have desisted from conquering several nations in their neighbourhood, that they might have the means of procuring victims for these dreadful sacrifices. Need we wonder that Divine vengeance should have overtaken such a government?

In Africa, war is carried on likewise with much

inhumanity, although with less than in America, from its not being mixed with fanaticism, and because the ordinary object is to obtain captives and booty: hence it is customary to save the lives of their prisoners. In Europe, war in the present day is a consequence of the covetousness of nations, or, more frequently, of the ambition of princes. Although unhappily too frequent, it is often professedly carried on for the interest of trade, or of the nation at large. It has its laws like a state of peace, and its fury is thus considerably moderated. A small part only of each nation enters into actual conflict, and as money is the main spring of its operations, peace takes place as soon as this essential sinew becomes deficient. In some parts of Asia war is of rare occurrence, and not sanguinary. La Loubère, the traveller, says that the king of Siam was in the habit of giving instructions to his generals to abstain from killing their opponents. The Chinese have almost as little of a military character as the Hindoos, and are much more inclined to resort to political manœuvre than to open force. The Turks and Persians are more warlike, but are still greatly inferior in point of tactics to Europeans. Yet, notwithstanding the mild character of many Asiatic nations, luxury has introduced there the barbarous custom of reducing captives into a state of slavery, and of

frequently mutilating male slaves to serve as eunuchs. From the antiquity of these disgusting practices, I am inclined to consider them as having taken their rise in the infancy of Asiatic population. Slavery, however, is much milder in Asia than in the other parts of the world ; for it is there not unusual to see female slaves become the conjugal partners of their master, especially when they embrace their religion. Thus in considering the different kinds of mischief caused to mankind by war, we find it produce victims in America, slaves in Africa, prisoners in Europe, and servants in Asia.

From these observations it is apparent that barbarism decreases in proportion as nations advance in the progress of society : we shall now see that luxury becomes augmented in a similar ratio. Nothing can be more limited than the state of commerce among the Indians or native tribes of America. No one ever heard of articles of clothing, of furniture, or even of armour, being received from that quarter ; but as they live in a state approaching to that of Nature, the rest of the world has been occasionally indebted to them for useful products. By these I mean the manioc and yam ; the potatoe, vanilla, chocolate, tobacco, coffee, indigo, cochineal, tortoise-shell, furs, &c. We are indebted likewise to America for the cultivation of coffee and sugar ; for, although trans-

planted from Asia, these articles are raised at much less expense in the western than in the eastern hemisphere. The natives of America have indeed very little merit in regard to any of the first-mentioned products, except that of showing us their use; but he who presents mankind with a useful plant, renders them in my opinion as great a service as the inventor of an art. How long might the bitter bean of cacao have been allowed to fall from the branches without our ever thinking of roasting it, or of mixing it with a saccharine substance to make it a pleasant article of food? Would not our botanists have prescribed tobacco as a kind of poison, had not the American savages shown us practically that it might be used without bad consequences. I cannot help however considering the supply of gold and silver extracted from their mountains as a serious evil. These metals caused the death of a great number of the former inhabitants, and have been a source of war and bloodshed between Europeans.

The state of trade in Africa indicates somewhat more of industry; her products being raised without the aid of foreign cultivators. From its northern coast, subject to the Moors, we import turkey leather, dates, oil, wax, and corn: its western coasts give us gold-dust and ivory, along with a too great number of slaves for our colonial

labours in America. The trade of Europe extends, like the calls of its luxury, to almost every part of the globe. To rude nations, such as the Americans and Africans, we send such articles as brandy, gunpowder, guns, sabres, and hardware; to Asia our great export hitherto has consisted in silver: Asia does not herself export any considerable proportion of her produce; she receives the ships of other countries in her harbours. This is particularly applicable to China, whether we consider the intercourse by land or sea. The Tartars, the inhabitants of Thibet, the Russians, the Coreans, the Cochin-chinese, the Tonquinese, the Siamese, the Arabs, the Persians, and the inhabitants of the numerous isles of India, are all accustomed to go to China by land or sea, instead of receiving Chinese traders among them: on the whole, the export commerce of China is more considerable than might be imagined from the prohibitory policy of its government. Its articles are used in different parts of Asia, and sometimes even in Africa; her extent of trade with Europe, particularly in tea, is well known, and there is even an intercourse of some consequence carried on between China and Spanish America.

Though I have drawn a kind of parallel between the ages of man and those of different countries, I am far from saying that the characteristic

applied in the account I have given are permanent in the case of any particular nation. The virtues of every age may be naturalized in any country. France was once the seat of Druidical superstition; the northern extremity of Africa is inhabited by pirates, while the southern extremity has long been, under the Dutch, an asylum for commerce. The United States of North America may one day extend civilization among the savages at the back of their immense territory, and render these uncultivated regions similar to Europe in its present state. All that I have been desirous to show by reasoning is that each people is likely to preserve more or less of its former character during a considerable period. The old age of the white thorn is very different from that of the oak, although the shrub and the tree may have gone through an equal number of years. Each has its appropriate birds, who are to take rest under their foliage, and to embellish it by their harmonies. Nature takes a pleasure in this variety; and sometimes, when an old tree is overturned by the tempest, she raises from its mossy roots a vigorous shoot which renovates its youth. Perhaps the progress of time, the experience of misfortune, or the appearance of some beneficent character, like Lycurgus, Penn, or Fenelon, will bring back Europe to a state of

innocent simplicity without making any diminution of her strength or her knowledge.

It is a very difficult matter to impress with moderate views a nation actuated by avidity or ambition. Yet we may derive some useful lessons from a people in a different stage of society ; such, for example, as the Chinese. Although nothing is ascertained with certainty in regard to the time that the Chinese government has existed, it is doubtless one of the oldest in the world ; and while Europe is compared to middle age, we may find in China some of the marks of that wisdom which is the result of long experience.

History presents us with a succession of empires in the Assyrians, Medes, Persians, Greeks, Romans, and Arabs ; all of whom have been great and have fallen. The only permanent foundation of political power or public happiness is to be found in an attention to the laws of Nature. The denuded state in which we come into the world affords a strong argument for the necessity of mutual beneficence, and for keeping in mind the golden rule of doing to others as we wish them to do unto us. It is this maxim which Confucius calls the “ virtue of the heart,” which he recommends incessantly in his writings as the rule of behaviour in private life, and which he declares to be the proper basis of the nine maxims

of government, presented by him to the sovereign of his own country. The law in China, formed in a certain degree on this principle, makes reward and punishment personal to each inhabitant without exception; collects them all under their monarch like a family under their father, and thus gives the constitution much additional stability. It is by the equity inherent in Chinese laws that we are to account for the continued existence of the government, notwithstanding the corruption of the Mandarins, the prevalence of civil wars, and the repeated invasion of the Tartars. Its supporting power may be compared to the pivot of an old oak, upholding its hollow trunk against the tempests of heaven and the inundations of waters: instead of being overset, it appears to derive strength from assaults; its extensive foliage seems to find nourishment in the storm, and its roots are invigorated by the inundation of rivers.

The maxim I have just quoted is recommended to us in the Gospel as second in the list of our duties; it is for each of us the extremity of that ray of which God is the centre and mankind the circumference. It is this which renders us men, and which recalls us to nature in whatever part of the world we may happen to be born: it forces us to abjure, at least in our hearts, the prejudices of family, of parties, and even of national pre-

possession : it is this which forbids us to become Turks, Jews, Brahmins, or Africans, when we find we cannot be' so without ceasing to be men. In the midst of so many opinions, which arm nation against nation, this admirable precept shows us how to consult our own interest in that of mankind at large, and that of mankind in our own. Do you desire to know whether a maxim be just in regard to our treatment of others ? You have nothing to do but to apply it to yourself. In like manner, when anxious to know what may be justly expected by you, apply this maxim to others, and extend it to mankind at large : if not applicable to all, be assured it is applicable to none. In short this law is the happy instinct which approximates the different nations of the earth to each other, and it is the only invariable rule of what is just, good, decent, honest, virtuous, and religious, in all times and in all countries.

Fraternal Harmonies.

HITHERTO we have occupied ourselves with describing the harmonies of the different powers of Nature with each other: we are now going to delineate those which each power has with itself. The former are simple, the latter compound; the former exhibit the elementary organization of individuals; the latter those of their species and genera. The former compose the primary materials of the edifice of Nature; the latter form its assemblage: the one is physical; the other moral or social. Different, however, as our subject is from what we have hitherto treated, we still find solar heat the primary mover of the various departments of Nature.

Let us consider the sun, at the rising of the morn, when passing from a lower to a higher hemisphere: he first expands the atmosphere of our horizon, and a fresh breeze rises forthwith from the east to fill the void. The nocturnal dew, suspended in the air, falls to the ground; plants raise their heads; birds send forth their first songs; and man begins the circle of his labours and enjoyments. Each hour introduces a new harmony, until the whole disappear together under the starry mantle of night.

Let us now contemplate the sun in the beginning of the year, in the morning of the long day, during which he enlightens and warms our hemisphere. In that season, I mean in the beginning of the year, phænomena take place on a large scale in our part of the world. The whole of our atmosphere becomes expanded, while the atmosphere of the southern hemisphere moves forward to occupy the vacant space. Hence the warm and moist winds which blow from the south ; the ice of our pole becomes melted, shaken, and rolled down ; the ocean, increased by this new supply in the north, directs the course of its waters southward. The dew and rain of spring, produced by a tepid atmosphere full of vapours, add to the fertility of the soil ; vegetables, inspired with new life, send forth their foliage ; birds prepare new nests with joy ; man resumes the labours of agriculture, navigation, and commerce. In short, each day ushers in new blessings from the hands of Nature during the season of spring and summer.

The revolving hours bring to us the different harmonies of the day ; the revolving day those of the year ; and finally, revolving years bring to us the harmonies of life. After a certain number of periods of the annual course of the sun, the elements themselves undergo crises which vary their harmonies ; hurricanes, volcanoes, earth-

quakes, give the atmosphere a different temperature, and even make some alteration in the division between land and water. A given period of lunar months and solar years determines in each vegetable the age at which it shall come into flower ; in each animal the age of puberty, and in all mankind the harmonies of life. It is towards the age of seven that a child ceases to be an infant, and begins to enter on the morn of life ; his new teeth give an indication of the propriety of a partial change of diet. Small-pox, measles, and cutaneous eruptions, are the maladies of the spring of life. A similar change takes place in a youth's disposition ; maternal love is no longer all in all to him ; he requires equals, companions, friends, new pleasures, and new labours. It is thus that he enters into that career of which he is destined to run through all the periods, until death cast a funereal veil over him, in the same way as night closes the day, and winter the year.

Analogies of this description might be greatly extended ; a circle or accumulation of the lives of individuals produces what may be called the harmonies of tribes ; those of tribes produce the harmonies of nations ; those of nations, the harmonies of mankind. Nay, it seems to admit of little doubt that our globe, with all its inhabitants, has a relation with the globes which turn round

the sun, and that the orb of day himself, immense as is his sphere, has a relation with the fixed stars, created for the fulfilment of plans far beyond the comprehension of feeble mortals.

Let me, however, confine myself to the powers of Nature as they appear on our humble sphere. Hitherto I have exhibited them in a simple and tranquil state; I am now to show them in a complex and active situation; I am to attempt describing their relations with the harmonies of seasons. I do not pretend, like Phaëton, to lead the horses of the sun; but, like the swallow, to shape my fugitive course on that of the orb of day.

Fraternal harmony is one of the fundamental laws of Nature. It consists in what may be called agreement, conformity, or coincidence; such as this, that the bodies of all animals are composed of two similar parts, formed for mutual assistance. A sphere is composed of two equal parts, so that even the stars bear a testimony to the general existence of the harmony in question. The sphere is the most perfect of all shapes, because, admitting of division into an infinity of equal halves by every point of its circumference, it unites in itself an infinity of the conformities I have mentioned. In fact all curves are generated out of different revolutions of its circle, and angular forms out of combinations of its chords and

radii ; while its different parts being in equilibrium round a single centre, it alone is susceptible of every kind of movement.

This conformity, (*consonnance*,) which in the heavenly bodies is spherical, exists in a simple form in the organized bodies of the earth. Every vegetable and every animal is formed of only two similar halves, with organs in equal number. I shall not now dwell on that law of contrast which shows us, in organized bodies, two opposite halves, in the same way as the above-mentioned definition exhibits two corresponding halves. We have seen that these two laws might be said to exist in the earth at large, our eastern hemisphere coinciding with the western, while the southern formed a contrast with the northern ; such contrasts belong to a different part of our subject, and shall be treated accordingly.

Nature, not content with establishing conformity between all the members of an organized body, that they might afford each other mutual aid, has also put these bodies in correspondence with each other, so as to establish links of connexion between all the parts of her works. Thus in the firmament, the orb of day is in correspondence with that of night ; the one coming to spread his light over that hemisphere which the other forsakes. Hence the notion among the ancients which led to calling these orbs brother

and sister, and to describing them figuratively under the names of Apollo and Diana. This fraternal harmony is however more conspicuous between the moon and the earth, which reflect mutually the sun's light. It extends even to the satellites which surround Jupiter, Saturn, and the Georgium Sidus, all of which are lighted and warmed in turn by the same paternal rays.

A similar correspondence is found to exist on earth among the elements. The east and north winds correspond in point of cold and dryness, while those of the west and south correspond in warmth and moisture. However great the apparent irregularity of the globe at its surface, there is not a single spot in the midst of the sea or in the heart of the land, in the torrid or in the frozen zone, which does not feel both cold and warm, dry and moist winds. Springs may be said to join in this fraternal manner in the valley, and the hills to have re-entering and salient angles in correspondence with each other. It is thus that water has a reflecting power, and the ground echoes in correspondence with each other: never is a landscape more interesting than when the reflection of the rivulet represents the shape of the hill; and the echo of the hill, the murmur of the rivulet.

The fraternal harmonies which group vegetables together will be found to exhibit results equally

admirable. We take a pleasure in seeing an insulated tree with all its elementary harmonies; but we experience a different and a greater pleasure on seeing it interweave its boughs with a tree of the same species, and both lend each other a support against the rage of the storm. It is fraternal harmony that unites them—that is the source of the pleasure which we experience at the sight of a grove, of a long avenue, or of a border of green turf. Nature points out to us a sure method of disposing each kind of vegetable in the most suitable order; namely, that of planting it agreeably to the manner in which its seeds are arranged in their capsules. Thus the sturdy oak, whose acorns grow one by one, or two by two, has a stately look, whether it stand alone or be grouped with another oak; but firs, pines, and cedars, the kernels of which grow in a circular and pyramidical form, produce a much better effect when they form, in pursuance of the same order, a thick grove on the summit of a mountain, than when insulated and dispersed. By the same rule, a vineyard is less pleasant in a plain than when its stocks are arranged round a hill in the same order as its grains around a bunch of grapes. Fraternal harmony groups not only individuals but genera; it gives tendrils to the vine to clasp the elm, and filaments to the ivy to lay hold of the trunk of the oak. No doubt

we derive pleasure from the variety of the trees of a forest, as well as from that of the flowers of a meadow; but that pleasure arises from harmonies of a different description, and my present object is confined to the sentiments suggested by the arrangement of vegetables of the same species.

Fraternal harmony appears with still greater charms in animals, because they possess sensibility, and because they themselves provide for their wants, which are more numerous than those of vegetable products. Nature has given them two organs to communicate with each other at great distances; one active, the other passive; I mean the voice and the faculty of hearing. The former has its origin in the breast near the heart, the seat of feeling and passion, while hearing is fixed near the brain, the seat of understanding.

I do not possess anatomical knowledge enough to enable me to speak of the admirable construction of these organs, and of the wondrous variety of the different species of animals; suffice it to observe that, in general, the capacity of animals is in an inverse ratio to their corporeal weakness; and that all the sensations of hatred and love, joy and sadness, fear and hope; I may say, in short, all the passions, are distributed among them in proportion to their wants, and expressed by innumerable modifications. Yet these expressions are so determinate, that animals

of a different species, and even man, seldom mistake their character. Who would undertake to make a collection of these almost invariable elements of the primitive language of Nature? The search would, no doubt, lead to a catalogue of all the sounds in human languages, and in some cases to entire words articulated at length; perhaps the ears of animals do not receive the same sounds in the same proportions, any more than their eyes receive the light. The eagle elevated in the air contemplates the sun, and discovers distant tracts with eyes which have a telescopic range; while the bee, in its obscure hive, works at its combs with eyes resembling a microscope.

In general, carnivorous animals have the opening of the ear turned forward to catch the sound of their prey, while those who live on vegetable products, have the same opening turned behind, and admitting of being moved backward and forward, that they may be enabled to hear in any direction the noise of an approaching enemy. These are important distinctions; but the power of hearing and of making a noise are given to every species, as without it they could not live in society with their fellows. Animals with a feeble voice, as is the case with many insects, seem to lead a solitary life; although in the season of love they are brought together by a kind of

humming. The insect, called the death-watch, makes during night a noise like the ticking of a watch to call his female; the fire-fly lightens his brilliant spark in the dark; while the fishes of the ocean seem to hold communication with each other by the shining of their scales in the midst of the waves, and during night by the phosphoric fires produced by their motion.

If fraternal harmony gratifies us by the vegetables which it disposes in groups, it pleases us still more by those which it establishes between animals. The latter often live in the order in which they are born, the plan of their life being formed in their cradles. Turtle doves fly two and two, partridges in coveys, perhaps in nearly the same number as the eggs hatched together; wild boars collect in troops, dogs in packs, viviparous fishes in pairs, the oviparous in legions. We may form some idea of the fraternal habits of animals, by the number of eggs in their nests, as well as by the teats of their mothers. This correspondence extends even to insects, and bees live together in such union, only because they spring from a single mother, and have been reared in the same hive. A series of individuals born together forms a family, and a series of such families, neighbouring and contemporary, compose a tribe, all the members of which lend each other assistance. Such is that of the beavers,

such that of the wild pigeons in America, a part of whom are occupied in beating with their wings the acorn from the oak, while the other part collect them on the ground.

While materialism endeavours to reduce all the laws of Nature to blind attraction, the example of the animal affords a strong argument in favour of fraternal harmony. It is in vain that, when transported from one climate to another, he is offered such food as he had from his infancy : he is reluctant to partake when he has no brother at the feast. The rein-deer of the north, the turtle dove of Africa, the lama of Peru, the beaver of North America, when insulated in a royal menagerie, are seen to call by their lamentations for the companions of their infancy.

Fraternal harmony is therefore the first of the social harmonies, because it prevails not only in vegetable and animal products, but in the elements. Thus harmonic laws, which collect the members of organized bodies, and group individuals or them together, have an existence as real as that of those attractions which unite the different parts of unorganized bodies.

We have already seen that man was born for society, because he feels in a manner the wants of all animals, without being able to provide for them otherwise than by the assistance of beings of his own species. A new proof of this may

be found in the structure of his voice, and of his faculty of hearing. His voice can be made to imitate those of all animals, and his ears, formed of acoustic curves of the most ingenious shape, receive every sound which rises around him. These organs are framed with so much skill, that they are capable of expressing and receiving all the affections of the heart, and all the reasonings of the mind, while those of animals can only express and receive a single idea, or the first cries of passion. How inadequate a use would man make of so perfect and extended an organ, were he destined to lead a wandering life in a forest? He has, in fact, need of the services of his fellow men from his birth to his death; and between the one pole and the other there exists not a man who is not, somehow or other, in correspondence with others of his own species. The spiceries, the dyes, the cloths of Asia; the coffee, the sugar, the cotton, the furs, the gold and silver of America; the ivory and the negroes of Africa; are all made subservient to the wants of Europeans: while the iron, the wine, the ropes, the paper, the fire-arms, and all the productions of European industry, are spread all over the world, even in quarters very little advanced in civilization.

This correspondence has existed in a physical point of view more or less in every age; but it

is still more extensive in a moral sense. Usages, laws, opinions, political and religious traditions, are not only communicated throughout the globe, but form the bonds of connexion between past and future generations. The globe, considered along with mankind, is like the disk of a daisy, each floret of which is in the centre of one circle and in the circumference of many others; the first link in this social chain is, beyond dispute, fraternal harmony.

But if man be the source of every blessing to man, he is also the source of all the evils of his species. It is with the hope of being in some measure conducive towards lessening these evils, that we have laboured to point out in the preceding pages his duties to his fellow creatures. We have dwelt both on his physical harmonies with Nature, and his moral harmonies with his Creator. We have put all his parts in equipoise, in order that his frail bark might navigate the ocean of life without danger of oversetting; for it must swim alone before attempting to navigate in company with others; nay, it must often put itself on its guard against other barks, which are frequently more dangerous to it than shoals. If the tempest rises, if death extends his gloomy veil over the waves, the soul of man ought to turn towards the Deity, in the hope of obtaining a clear indication of his course. Were he to lose

in society the marks of that Providence which is manifest throughout Nature, he would not fail to find them in his own heart. Hence the necessity of a careful education of a youth, and of a well regulated disposition before entering on the voyage of life. A youth may have parents of harsh character, or ignorant teachers; how can he look for guides among persons who have inspired him with a dislike to instruction? The sophistry of metaphysics has at certain times obscured our ideas of the Divinity in a manner which patient and attentive reasoning alone could remove. We have even been told that mind was a material substance. It is for the purpose of avoiding the contagion of these illusions that we have endeavoured to rest our moral doctrines on Nature, which never perishes, and on our own heart, which is always in search of Nature; let us accustom a child to resort to his heart as to a secure asylum. When the sun removes from our hemisphere, many animals retire into subterranean recesses, and continue in life by means of the fire which the orb of day has put into their veins; man at that season derives heat from his own warmth; and if this may be said in a material sense, equally may it be said in regard to the workings of the soul. The soul derives relief from reflection in all the accidents of life; and Socrates, when in solitude, offers a striking

example of the power of reflection ; his mind found in it consolations which society could not have afforded him.

It is necessary then that a young person should be taught to keep his mind in its original purity, and to cleanse it daily from every extrinsic corruption, in the same way as he washes and cleans his body. Let him, every morning, after having raised his soul to Heaven, propose some commendable action for the day ; and at night let him consider whether he has not indulged some improper feeling or passion. Let him ascertain that he cherishes neither hatred, vengeance, jealousy, nor covetousness, and let him remember that, as there is no place in Nature without some work of the Divinity, there is none also without a witness.

The perusal of good books, and particularly the contemplation of Nature, will present him with the soundest aliment for his mind. The mind is a kind of torch to guide the heart ; it burns, but without warmth and splendour if we fail to feed it. If directed properly to external objects, there is little danger of its recoiling on itself, and inflaming our passions. Our heart is guided by the light afforded to the mind, and is directed by it to all its social duties. Hence the importance of storing our mind in such a manner as to make it the seat of rest and order ; for how

can it act a proper part towards others, if it is badly regulated in itself?

The habit of reflection and self examination is farther recommended by the primary maxim in morals of doing to others as we wish them to do to us. How should we know what we ought to do in regard to ourselves and others, without the course of meditation which I have just mentioned? Such reflections require no effort; they are natural to man: his ambition is apt to refer every thing to himself, and to put him, in imagination, among the fortunate part of his species; but the duties of morality oblige him still oftener to put himself in the place of the unfortunate. Selfishness considers every thing as it affects our own welfare; virtue as it affects that of others. Virtue alone is equitable; for she extends her considerations to mankind at large, who are necessary to each other. When the question is whether to approve or to censure any one, we must not be influenced solely by our own position. Life is an extensive mountain, on which different ages place us successively at different stages; first on the ascent, next on the summit, and lastly, on the descent. Again, constitution, fortune, health, education, all constitute points of difference. If the aged have more experience than young persons, it is because they have run through a wider range. To blame persons at a

distance without carrying our thoughts beyond our own situation, would be like censuring a native of the torrid zone for going without clothes, because the cold of the north requires a warm covering.

This flux and reflux of reason is natural to man. An animal is guided by his instinct; man by the example of his fellow creatures: man imitates nature, and a child imitates man; hence a reason for the superior efficacy of example to precept. To preserve in a child equanimity in point of temper, and rectitude in judgment, which are so necessary both for the discharge of his duty and for his personal comfort, he must not apply to any study which would either blunt his sensibility or exalt it too highly. We ought therefore in ordinary education to reject both the study of the abstract sciences, and that predilection which is natural for works of imagination. The grammars by which it has hitherto been the practice to commence our studies are, as I have said already, the metaphysics of language. They did not precede it, they followed it; they are, in short, the results of language. Let it suffice then that a child learn his mother tongue by practice, and by the reading of good writers; let him postpone the study of its rules until his judgment be formed; no fear of his composing prose, as is said in the play, without knowing

how. The same remarks apply to mathematics. That science is said to improve the judgment of a man, but it oppresses that of a child; it is a prop which stifles its plant. Of those who have distinguished themselves in that study, or in the abstract sciences, at an early age, few have attained eventual reputation.

Pascal had made a surprising progress in mathematics by the age of twelve; but he spent his life in passing censures on mankind; in rejecting the assistance of his own sister; and he died exhausted at the age of forty, imagining always that he saw an abyss at his side. The study of the higher mathematics and of metaphysics weakened the springs of his judgment in middle age, as if they had been too much stretched in infancy. Yet mathematics have notions suited to an early age, because they are addressed to the senses; I mean those of lines, angles, circles, squares, &c. but their abstract properties should be an object of study with a philosopher, not with a child. All that we should do is to give him a prospect of serious study at a distance, so as to create in him one day a taste for it. Were I desirous of giving him an idea of the elements of mathematics and of the laws of motion, I would employ a billiard table, or rather a set of bowls and nine-pins, that exercise of body might go on conjunctly with that of mind. We aim at

communicating theories of every kind to youth, but Nature acts differently ; she conveys her first lessons in a kindly form, leading us on step by step, offering no obstacle but the attendant labour, and inviting us by the pleasure accompanying new discoveries. She shows us leaves before flowers, and flowers before fruits. The most smiling landscapes contain the most brilliant phenomena, and she invites us to study them by the charm of contemplating her in all her beauty.

If the abstract sciences deaden the fancy of a child, the arts addressed to the imagination are apt to affect its judgment ; such, among others, are music, painting, and poetry : to press them on a young mind is like putting lime at the foot of a young plant ; the plant is brought early into flower, but it is undermined and falls before its time. It is deserving of remark that children who have been made to give attention to abstract sciences, or arts of imagination, have in general less command of temper than those who are occupied with mechanic arts : the reason, in my opinion, is that their mental springs have been either too much compressed or too much expanded. The same will be found to hold in regard to their bodies when long kept in a state of constraint ; their frame will be pressed down in the same way as their mind. The study of lite-

rature, agreeable as it is, becomes productive of fatigue and exhaustion, if it keeps us long in the same situation. Every one is aware of the irritability of men of letters, and particularly of philosophers; poets are perhaps the worst of all, because their labours cost them so anxious a stretch of thought. It strikes me that if Socrates preserved that admirable equanimity which was unknown to his disciples, Plato and Aristotle, he may have been indebted for it to his not subjecting himself to the labour of written composition. Perhaps it might be owing likewise to his having followed in youth the business of a sculptor, which appears to me a complete school of patience. Moreover, I cannot help thinking that we may find, in the characters of several nations in Europe, an evidence of the influence of the abstract sciences and of the arts of imagination. If the English be deficient in cheerfulness, it must be owing to their attention being too early given to Latin, Greek, and mathematics, in which they carry their studies farther than we do, and if, on the other hand, the French and Italians have a frivolity of character approaching sometimes to folly, it is to be ascribed to the study of the arts of the imagination, in which they excel. Warmth of climate is of no consequence in this respect, whatever Montesquieu may say to the contrary,

as I have proved by instancing the gravity of the Turks and the petulance of the Greeks, though born in the same country.

At the same time we must not indulge in sweeping epithets in regard to character, as the slow and the lively, the gay and the serious, are frequently found in the same family, and are equally useful to society. Let our care be to cultivate in our youth the love of God and of mankind, by way of giving them a common centre of affection. With the virtues proceeding from such impressions they may get through life without any extraordinary attainments, and all attainments are dangerous without these virtues; I ought rather to say that without them there is no such thing as true attainments. We have already observed that Atheists have never made a useful discovery, because they perceive no intelligent beings but themselves in Nature. Truly may it be added that they have never known what it is to feel love for mankind; they have been prompted only by ambition; and how is it possible that such a passion should not be predominant with men who see nothing superior to themselves in the universe?

The first sentiment then to be cultivated in a child is that of reverence for God, that he may find an assured refuge there at all times, as in a haven safe from the rage of tempests. This is the way to make him attached to life without fear-

ing death. The most barren land would thus seem to him a delightful abode; and heaven, with its brilliant constellations, will appear the port where his voyage is destined to terminate.

As my first object is to teach a child to act for himself, and to become independent of the fluctuating prejudices of society, I should aim at establishing the first fraternal harmony between him and characters of well-known benevolence in a former age. I should wish therefore that some feeling and judicious writer made a collection of the lives of virtuous men who have deserved well of mankind; their example would be of greater influence on a child than any precepts. They would be fixed stars to direct his soul in attracting it towards heaven; and in approximating it to the Divinity. He would there find consolation in his misfortunes, and would see that men the most justly celebrated have been unfortunate in their infancy. For my part, on coming to contemplate their progress in life, I find that it is to their adversity chiefly that they have been indebted for their love of God; a love which has proved the source of their illustrious qualities. They acquired a just feeling of the rights of mankind, because these rights had been violated in regard to them; they were duly impressed with the existence of a Divinity, because they found no refuge but in him. The Greeks discovered a

just sense of this truth on representing Hercules, the son of Jupiter, as persecuted by Juno from his cradle ; but we have no need to refer to fable or allegory, for we shall find in the history of all nations that most of the men celebrated for their virtues were unfortunate in their youth. Taking misfortune in its most general sense, we comprehend under this head a gloomy education, infirmity, indigence, prejudice, and harshness on the part of parents and of masters. Socrates, Amyot, Jean Jaques Rousseau, and a number of others in different ages and nations, might be quoted in support of this argument. A larger proportion still might perhaps be found among those who have led an obscure but comfortable life ; for misfortune often proves the cause of future comfort, in the same way as it proves a school for virtue. Nor would the history of the fortunate obscure be the less important of the two, since Nature calls all men to comfort, and very few to glory. My wish would be that a boy should choose a kind of model among those with whom he should imagine himself to have most points of resemblance, and that he should add the name of this pattern to his family name. This kind of adoption was practised among the Romans ; it still exists in a more affecting manner among most of the nations whom we call savage, but for whom uncivilized would be a more appropriate

epithet. Among these, two friends are in the habit of exchanging names, and imagine that they have thus made an exchange of souls. A child, adopting with his own free-will the name of a virtuous character, will exert himself to model his disposition upon it. It would be well however to point out that this resemblance cannot be supposed to hold in all respects; we may aim at the same virtue, though not by the same paths; we have all occasion for the patience of Socrates, but we have not all a Xantippe to exercise our temper. However, the imitation of a virtuous man, for whom the veneration of the world has increased as for a monument by lapse of ages, is a great bulwark against vice; it is a kind of union with a superior being.

One of the chief advantages which a youth would find in the lives of virtuous men is a hatred of falsehood. It was a great point of education among the ancient Persians to impress on their children the importance of truth. I was long under the idea that such an education consisted in teaching young persons to be always frank and open; but I have lived long enough to become aware that unreserved frankness would be productive of a great deal of mischief in the world; that it would draw on a youth a number of enemies, and would, in short, make him very uncomfortable without conducing in almost any

respect to the benefit of the persons of his acquaintance. It is a very difficult thing to arrive at a knowledge of truth, and very few men are willing to listen to it. A citizen or a farmer are just as despotic in their opinions as if they were sultans. Most quarrels in society arise from persons speaking the truth to each other; *veritas odium parit, obsequium amicos*, says the sagacious Terence. Those quarrels for religious and political objects, which have caused so much bloodshed among well-intentioned persons, generally arose from the love of truth mixed at bottom with personal ambition; for a fanatic becomes impassioned only by the hope of arriving at great distinction. From all this I infer that the Persians did not mean to teach their children unrestrained openness, as that would have put them in the way of perpetual disputes: besides it is not necessary to teach it to children, their own disposition inclining them naturally to it. Moreover, openness, in the sense at least of readiness to communicate, is not a virtue but a mere quality, the result frequently of weakness and inexperience; of an incapacity to keep a secret; and often indeed of our pride; which impresses us with a high opinion of ourselves, and a profound contempt of others.

To be enabled to speak truth it is necessary we should become acquainted with it, which is by

no means an easy matter. Error is found in every part of the world, and hoists its flag on the most conspicuous stations, while truth conceals itself, and withdraws into obscure retreats. Look only at the different systems of religion, that pivot on which all human society may be said to turn. It would be no difficult matter to enumerate at least 500 creeds, each of which is believed by its followers to be the true one, while all others are accounted false. Even the mild Hindoos, who say that God has made twelve gates for heaven, by each of which the different nations are called to him, could not think of entering there by any other gate than that through which their forefathers have passed. But in Europe many sects are still more intolerant and inconsistent in believing that there is only one path to the abode of bliss, and by thus putting themselves at variance with the vast majority of mankind.

How shall we then define that truth which we are so desirous to know, and which so frequently escapes from us? It is a harmony of our understanding with the Divinity; a due impression of the correspondence established between all his works; it is the life of our soul. Nature urges us to its search in the same way as to the acquisition of food, on pain of disquietude, languor, lethargy, and death. Truth is a ray of the Divinity; it is

to our soul what solar rays are to our bodies ; it enlightens, rejoices, and animates. If, as Plato has sublimely defined it, the light of the sun is but the shadow of God, truth may be called his substance ; it presents itself to our understanding as the light of the sun to our eyes, by decomposing itself into a thousand colours and reflections, which delight us when contemplated in the works of Nature, but which dazzle us if we aim at seizing them in their essence. It is to be traced in the writings of the sage, and in the actions of the virtuous ; but, like the fire of the sun amid the products of the earth, it shines only with borrowed light. It is there little more than a feeble lamp shining in the absence of the sun, and liable to be put out by the blast of the tempest.

As truth comes to us only by means of men who are naturally subject to error, by what characteristics are we likely to recognize it?—By those of virtue, and by its universal correspondence with Nature. Thus, for example, the theory which places the sun in the middle of the universe, has greatly the appearance of truth, because it is natural that the sun, the dispenser of light and heat, should be in the midst of the planets to which he distributes those blessings. It is accordingly both fit and probable that the earth should turn round herself and round the sun, in the same way as other planetary bodies.

This truth, apparently so opposite to the testimony of our eyes, came to us only by means of communication with other portions of mankind. Like our corn, our fruit trees, and our arts, which have come from Asia, Africa, and America, it was first discovered by some Pythagorean philosophers who were great travellers: it was subsequently forced to give way to other notions, and re-appeared in Europe only when commercial voyages had led to the circumnavigation of the globe after the discovery of America; a discovery occasioned by that of the mariner's compass made some ages before. Each of these discoveries tends to illustrate the necessity of mankind affording aid to each other.

The belief of the unity of God has fluctuated in the minds of men like that of the motion of the sun. Every people had their particular Deity, and it was only after a great deal of communication with each other that they began to acknowledge a single governor of the universe. I cannot but think that our disposition leaned naturally towards the true belief; but the self-love of mankind led them, in former ages, to imagine that the God of Nature occupied himself only with the country which they happened to inhabit, and even with a particular individual.

Probability, fitness, and the general concurrence of mankind, being the principal characteristics of

truth, it is incumbent on us to apply these rules in judging of those in whom we are called to put confidence. The authority of a writer should be in proportion to his virtue; meaning by virtue, not what is reputed such by his party, his nation, or his sect, but that which is accounted such in Asia as in Europe, and which would have been so two thousand years ago as well as at present; for virtue is not only universal, but eternal, inasmuch as she emanates from the Divinity.

Truth being then the fruit of our researches, is a property belonging to us; it is the heart of our soul, and man ought no more to communicate it to tyrants, than to trust his lamp to the blast, or his purse to a robber.

At the same time, we must not flatter ourselves with arriving in this world at the heart, or at the inmost recesses, of truth. Let us account ourselves fortunate when we catch some of its rays: they seem to extend themselves among mankind in proportion as the latter maintain an adherence to virtue, and a friendly communication with each other. A knowledge of truth proceeds always in an augmenting ratio, for infinitude is one of its characteristics, as well as universality and eternity.

Of Friendship.

FRIENDSHIP is a harmony between two beings who have the same wants. It is thus more common among the weak than the powerful; it exists more strongly between one youth and another, than between a youth and a person of years. It is stronger in the age of passions than in boyhood; it is more constant in middle age than at a previous time of life, because the remembrance of services performed is joined to the prospect of future services, and because the sentiments of Nature are by that time fortified by habit.

Friendship is created by satisfying the same wants, as enmity is engendered by desiring the same things. The hatred existing among men, and even among animals, arises from the competition of the same passions in quest of an object which does not admit of being divided. Hence the jealousy engendered by love, and the friendship which arises among warriors; a lover does not need companions to aid him in following up his suit, while warriors must have them to co-operate in the task of destruction.

Friendship takes its first rise from physical wants, and may subsist a long time by the mere relations of pleasure, taste, exercise, and interest.

It next extends to intellectual wants, and is augmented by studying kindred arts and sciences. Finally, it becomes virtue, because it requires sacrifices and indulgence, and because it is constant and sublime only when it rests on a due impression of the Deity, and of the duties of humanity.

Books on morals are of advantage to friendship, but injurious to friends. It is so convenient to find in our library an enlightened, discreet, and sympathetic friend, always disposed to speak to us, and always exempt from bad humour, that we are naturally led to neglect our friends out of doors. Great writers have the effect of withdrawing our minds from society. Plato wished to banish Homer from his republic after having crowned him : I would propose a different course ; that of adopting all the good works on morality, but of reserving our crowns for sincere friends.

I have in general observed friendship in greater number, and of more constancy, among persons who read little, than among those who read much : indeed it rarely happens that men of letters render service to others engaged in the same pursuit. The men who have acted the part of Mæcenas have in general been devoid of literature ; witness Augustus and Louis XIV. There often exists among literary men a jealousy which disposes them to wish ill to each other.

Aristotle, Plato, and Xenophon, are said to have been by no means on good terms, although all disciples of the Socratic school. University quarrels seem to have a particular character of exasperation, if we may judge from the rancour displayed in the contests of theologians. Richelieu, after becoming a cardinal and a minister, made Urbain Grandier be burned alive as a sorcerer, partly, it is said, for having disputed with him on a thesis at the time of Richelieu's receiving his licence from the Sorbonne.

If, however, jealousy be less violent among persons devoid of literature, affection is greater in those who are endowed with it. The stomachs of the ignorant are strong, but those of persons of taste are more delicate. As true friendship resides in virtue, we may take for granted that there is no friendship to be compared to that of a man of letters who is virtuous.

Friendship throws a most pleasant shade over life, and resembles those evergreens which bear fruits and flowers together. Have we on record a more affecting attachment than that of Scipio and Lælius? that of Virgil for Gallus and Pollio? of Plutarch for Senecio? of Tacitus for his father-in-law Agricola? But friendships fixed on men in high stations are too subject to storms: the most obscure are frequently the happiest; while the strongest are found in those conditions

which are exposed to the greatest share of danger, their strength serving, no doubt, by way of counterpoise to the hazard incurred.

Soldiers and seamen are perhaps fully as much alive to the feeling of friendship as any other class of society: they are in general of a confiding character, and take each other's words without requiring any formal security. The dangers which they encounter together seem to consolidate their attachment. Distance of place and time seems likewise favourable to such feelings: the mind turns with a stronger interest to its friends in America than in Europe; to the companions of its infancy than to those of the passing moment; to the memory of the dead than to the character of the living. The soul appears to extend itself as distance extends, and even to fly over the limits of the grave on the wings of friendship. I still remember with pleasure, an inscription which I had written long ago, in my room, on the lower part of a little vase, as a memorial of the attachments of my infancy. Humble as is its merit, I shall insert it here on account of its affectionate expressions.

D. M.

Aux objets doux et innocens que j'ai aimés
et qui ne sont plus,
j'ai élevé se petit vase d'argile,
simple comme leur beauté et fragile comme leur vie.
O ombres heureuses !
reposez-vous sur cette coupe blanche
ou vous auriez aimé à boire avec moi
l'eau des fontaines et le lait des brebis :
les dons de la fortune sont méprisables,
mais les présens du cœur plaisent toujours aux habitans du ciel.

This little vase was the companion of another, dedicated to the memory of Rousseau and Fenelon, the inscription on which I have recorded in my "Studies of Nature." The recollections of innocence are equally affecting with those of virtue.

I know not whether Cicero's treatise on friendship has been productive of many friendships ; but the sacred band of young Thebans contained a great number, who, after living in the most perfect union, fell all in one fatal day with their countenances turned towards the enemy. The assemblages of young Lacedemonians appointed by Lycurgus were nothing but institutions for the promotion of friendship ; the youths in them were called brothers ; their first gods were Castor and Pollux, and they were accustomed to sing the hymn of these celestial twins in going to battle. Thus were the attachments of friendship

the first basis of the famous constitution of Lycurgus ; they consolidated it like the stones of an edifice placed two by two on alternate points.

It is wholly out of the question to educate the children of a nation of such extent as ours in the manner of the Spartans. The latter were a kind of military monks, with Helots as their lay-brothers, who, as is well known, were made to take on themselves the drudgery of every profession, and among the rest, of agriculture. My wish would be that two pupils should form a union as friends, and should have in common several kinds of little property, such as vocabularies, papers, and books ; they should be called on to assign publicly reasons for their choice, which ought to be founded on virtuous considerations, and should be expressed thus : “ On account of such a commendable action, (specifying it particularly) which has come to my knowledge, I vow a fraternal friendship to this one, and I entreat him to do the same to me.” The youth would thus learn to understand the duties and the object of friendship, and the most virtuous would be most in request. From these mutual and public adoptions would arise the love of virtue, the habit of giving each other assistance, and a permanency of attachment. I should recommend, likewise, laying frequently before young persons celebrated traits of friendship

taken from the ancients, like that of Nisus and Euryalus, so admirably described in Virgil. Orestes and Pylades are of greater celebrity in history and on the stage ; but the criminal virtue of Orestes, who, to avenge the murder of his father, put his own mother to death, and who, to gain the favour of a reluctant mistress, assassinated Pyrrhus at whose court he was ambassador, are examples of too dangerous a cast. The example of Nisus and Euryalus inspires only innocence and obedience to the laws, along with filial and maternal tenderness. These faithful friends crown a heroic life by a gallant death ; by perishing for each other in the performance of an action of the highest virtue. I will not go the length of saying that this affecting passage is the finest in the whole *Æneid* ; but I am persuaded that it is one of those that most strongly interested the affectionate heart of Virgil. He ends it by a wish that the remembrance of the friendship of those two may last in his verse, as long as the posterity of *Æneas* shall govern in the capital. His wish has been more than fulfilled, for his verses have long outlasted the empire of his countrymen.

This episode contains more than three hundred and twenty verses in the ninth book of the *Æneid*, and an allusion is made to the two friends so far back as the fifth book. They are intro-

duced in the games given by Æneas in Sicily to celebrate the anniversary of the death of Anchises, and they are put at the head of those who compete for the prize in running :

Nisus et Euryalus primi ;
Euryalus formâ insignis, viridique juventâ ;
Nisus amore pio pueri.

First Nisus with Euryalus appears :
Euryalus, a boy of blooming years,
With sprightly grace and equal beauty crown'd ;
Nisus for friendship to the youth renown'd.

The poet even alludes to their friendship when coming to treat of the distribution of prizes ; at least I imagine that this is hinted at in the following words of Æneas :

Nemo ex hoc numero mihi non donatus abibit.
Gnosia bina dabo levato lucida ferro
Spicula, cælatamque argento ferre bipennem :
Omnibus hic erit unus honos.

One common largess is for all design'd :
The vanquish'd and the victor shall be join'd.
Two darts of polish'd steel and Gnosian wood,
A silver studded axe, alike bestow'd.

Whether we consider the two polished javelins and the two edges of the axe as referring to the attachment of the two candidates or not, it is clear that they constitute a premium which might be enjoyed in common by two friends.

Nisus, when nearly arrived at the goal, meets

unluckily with a fall, but, even in his fall recollecting his friend, contrives to upset Salius who was following him, and thus gives the victory to young Euryalus who was coming up after. Salius complains of the trick, and lays in his claim to the prize; but Euryalus excites the prepossession of the spectators by the beauty of his person, and modesty of his manner:

*Tutatur favor Euryalum, lacrymæque decoræ,
Gratior et pulchro veniens in corpore virtus.*

*But favour for Euryalus appears;
His blooming beauty, with his tender years,
Had bribed the judges for the promis'd prize.*

He thus carries off the first prize, consisting of a stately courser with his harness; Æneas indemnifies Salius by a lion's skin with the claws in gold, and Nisus by a buckler consecrated formerly to the gods.

We now come to the episode in the ninth book, which is highly commendable in a moral point of view, and is consecrated entirely to friendship and virtue, as the fourth book is to love. Virgil begins by making a contrast between the disinterested affection of these two young persons, who devote themselves for their country, and the selfish considerations which prompt the conclusion of the alliances against Turnus on the part of the neighbouring tribes.

Nisus begins by a religious sentiment: he says to Euryalus,

——Dine hunc ardorem mentibus addunt,
Euryale? an sua cuique deus fit dira cupido?

——Do the gods inspire
This warmth, or make we gods of our desire?

He proceeds to apprise him of his project of going alone during night through the enemy's host to get intelligence of Æneas, whose absence caused disquietude among the Trojans. Although meditating this enterprise alone, the expected recompense is destined for his friend:

Si tibi, quæ posco, promittunt (nam mihi facti
Fama sat est.)

If they confer what I demand on thee,
(For fame is recompense enough for me.)

Euryalus complains that Nisus should not think him worthy of accompanying him in so dangerous an enterprise, and addresses these affecting words to him:

Mene igitur socium summis adjungere rebus,
Nise, fugis? solum te in tanta pericula mittam?

Think'st thou I can my share of glory yield,
Or send thee unassisted to the field?

He adds, "It was not to behave in that manner that I was trained by the instructions of my father Opheltes, and by the example of Æneas."

Every verse is replete with an expression of virtue ; an heroic sentiment is added to that of filial attachment in these lines :

Est hic, est animus lucis contemptor ; et istum
Qui vitâ bene credat emi, quo tendis, honorem.

The thing call'd life with ease I can disclaim,
And think it over-sold to purchase fame ;

Nisus excuses himself by motives of equal purity :

Te superesse velim : tua vitâ dignior ætas.

Thy blooming youth deserves a longer date.

He proceeds in a religious strain, desiring his friend to render him, should he fall, the honours of a funeral ; and dreading to expose Euryalus lest he should inflict a mortal blow on the happiness of his mother, who, alone of all the Trojan matrons, had followed her son to the army.

A new warmth is excited in them by the mere communication of their feelings ; they go to give an account of their project to Iûlus, whom they find surrounded by the Trojan leaders, and uneasy at the absence of his father Æneas. The aged Alethes exclaims that the gods have not abandoned the remains of Troy, since they inspire so much courage and virtue into its youth ; he bursts into tears, and calls out, " Can we give

you a recompense worthy of so gallant an enterprise? but the gods and your conscience will give you the best of all rewards." Iulus, after having extolled the gallantry of the enterprise, declares to them :

*Bina dabo argento perfecta atque aspera signis
Pocula, devictâ genitor quæ cepit Arisbâ ;
Et tripodas geminos, auri duo magna talenta ;
Cratera antiquum, quem dat Sidonia Dido.*

Your common gift shall two large goblets be
Of silver, wrought with curious imagery ;
And high emboss'd, which, when old Priam reign'd,
My conqu'ring sire at sack'd Arisba gain'd ;
And more, two tripods cast in antique mould,
With two great talents of the finest gold :
Beside a costly bowl, engraved with art,
Which Dido gave, when first she gave her heart.

Here is clearly a reference to the well known friendship of these young heroes. Two goblets, two tripods to place under them ; two talents of gold, and an ancient cup to use in drinking together, are perfectly suitable to two young persons conected by so intimate a tie. This cup was given to Iulus by Dido at the time, no doubt, of her most intimate connexion with Æneas ; but, valuable as it is, it is insignificant compared to the proffered friendship of the young prince to Euryalus, who was nearly of his own age :

Te vero, mea quem spatiis propriis ætas
 Insequitur, venerande puer, jam pectore toto
 Accipio, et comitem casus complector in omnes :
 Nulla meis sine te quæretur gloria rebus ;
 Seu pacem, seu bella geram ; tibi maxima rerum
 Verborumque fides.

But thou, whose years are more to mine allied,
 No fate my vow'd affection shall divide
 From thee, heroic youth ; be wholly mine :
 Take full possession ; all my soul is thine.
 One faith, one fame, one fate shall both attend :
 My life's companion, and my bosom friend ;
 My peace shall be committed to thy care,
 And to thy conduct my concerns in war.

Observe how the rays of friendship strike from the one to the other ; we shall soon see them decomposed in colours more beautiful than the rays of light. The affectionate language of Iûlus revives the filial affection of Euryalus, who, less elevated by the prospect of the friendship of his prince, than distressed by anxiety for his mother, says to the son of Æneas,

———Sed te super omnia dona
 Unum oro. Genitrix Priami de gente vetustâ,
 Est mihi, quam miseram tenuit non Ilia tellus
 Mecum excedentem, non mœnia regis Acestæ.
 Hanc ego nunc ignaram hujus quodcumque pericli est,
 Inque salutatam linquo : nox et tua testis
 Dextera, quòd nequeam lacrymas perferre parentis.
 At tu, oro, solare inopem, et succurre relictæ.

Hanc sine me spem ferre tui ; audentior ibo
In casus omnes.

This only from your goodness let me gain,
(And this ungranted all rewards are vain,)
Of Priam's royal race my mother came ;
And sure the best that ever bore the name,
Whom neither Troy nor Sicily could hold
From me departing ; but, o'er-spent and old,
My fate she followed ; ignorant of this,
Whatever danger, neither parting kiss
Nor pious blessing taken, her I leave ;
And in this only act of all my life deceive.
By this right hand, and conscious night, I swear
My soul so sad a farewell could not bear.
Be thou her comfort, fill my vacant place,
(Permit me to presume so great a grace,)
Support her age, forsaken and distress'd ;
That hope alone will fortify my breast
Against the worst of fortunes and of fears—

The whole assembly are affected, and particularly the young prince, who was reminded of his absent father by the filial affection of Euryalus. The words employed on this occasion by Virgil (*patria pietas*) are expressive of the connexion between piety and filial affection ; they may be considered a confirmation of what I have already said, that the love of God is productive of love to mankind. The two friends now issue forth and pass through the camp of the Rutulians, where, aided by the obscurity of the night, they killed a number of the enemy ; unfortunately however a

troop of hostile cavalry appears at day-break, and disperses itself in the neighbouring forest. Nisus succeeds in getting out of their sight, but missing his friend he returns to look for him, and perceives him in a group of horsemen, who had him prisoner. Concealing himself behind a tree, he invokes the goddess of night, and throws two javelins with which he kills successively two of the enemy. Volscens, their commander, unable to discover whence the fatal blow proceeded, determines to take vengeance on Euryalus, and raises his sword to pierce him. Nisus now bursts forth from his concealment, rushes forward, and exclaims :

Me, me ; adsum qui feci ; in me convertite ferrum,
O Rutuli ! mea fraus omnis : nihil iste, nec ausus,
Nec potuit ; cælum hoc et conscia sidera testor :
Tantum infelicem nimium dilexit amicum.

Me, me, he cried, turn all your swords alone
On me ; the fact confess'd, the fault my own.
He neither could not durst, the guiltless youth ;
Ye moon and stars bear witness to the truth !
His only crime (if friendship can offend)
Is too much love to his unhappy friend.

The death of Euryalus by the sword of Volscens ; the rage of Nisus who kills Volscens in his turn, and perishes on the body of his friend ; the despair of the mother of Euryalus when she perceives, at day-break, her son's head stuck on the

end of a pike in the camp of the Rutulians, terminates this episode in the most affecting manner. I have dwelt on it at length because it exhibits friendship of the sublimest kind in harmony with the love of our parents and of our country. Virgil has comprised, in one single event, the leading duties of social life, which moralists are in the habit of scattering in a number of detached maxims.

We have many well-written treatises on friendship; but I know of none on enmity that deserves to be mentioned. Those who speak of pardoning injuries suppose the concession accompanied with so much malice as to excite a desire rather to avenge than to pardon. Writers on such subjects, however good their intentions, are generally like those awkward mediators who aggravate the quarrel which they seek to allay: yet it is a point of greater importance to know how to behave to our enemies than to our friends. The heart is our guide in friendship; all we have to do is to give scope to its affections: but it will lead us astray in enmity, if we listen to its impulse; in short, it would engender endless animosities. The worst of all is that enmities are generally greatest where intimacy has previously subsisted; witness fraternal animosities which have been notorious from the most remote times.

There is in the human heart a feeling of re-

action which inclines us to have as keen a sense of an injury as of a kindness, and to do as much mischief to an enemy as good to a friend : nay, resentment is generally strongest in a mind capable of strong attachment. Savages, who obey the impulse of Nature, offer their friends all that they have got ; their cabins, their victuals, and sometimes their wives and daughters : they exchange names with them, cry for joy at their arrival, and with grief at their departure. But these same men behave to their enemies with the greatest ferocity, burning their villages, putting mercilessly to death their women and children, and consuming their prisoners by a slow fire. Even the Greeks had for a long time habits of this kind, and, in the age of their greatest civilization, they wrote as an eulogy on the tomb of one of their celebrated men, that “ no one had surpassed him in doing good to his friends or evil to his enemies.”

The power of man extends, I am afraid, farther in the way of doing a bad than a good turn. It would surpass our means, in an individual capacity at least, to build a house for a friend if he is poor, to give him a character if unknown, to restore him to health if indisposed ; but it is no difficult matter for us, without the assistance of any one, to destroy an enemy's dwelling by fire ; his reputation by calumny, and his life by

assassination. There is consequently much more necessity for laws against resentment, which is so easy of execution, and the effects of which are so serious, than for laws relative to gratitude.

To govern ourselves in a state of enmity, it is necessary to know how to regulate ourselves in friendship. The heart is a loadstone with two opposite poles, one of which attracts, while the other repels love and ambition. Our tendency to love may be led astray in its first affections, particularly by a bad education in which it may acquire a number of idle fancies, and perhaps be tainted with bad habits. By way of avoiding the mistaken attachments and waverings so common to an early age, I have expressed a wish that each pupil should declare publicly that his motive for choosing his friend is founded on certain commendable qualities. As we should thus point his first affections towards virtue, the result will be the direction of his first aversion towards vice. At the same time, as his attachment extends from virtue to the person endowed with virtue, the contrary feeling might proceed from vice itself to the person guilty of a vicious action ; so that our pupil might, by a natural consequence, desire the destruction of that person as of a malignant being ; a consequence against which we must scrupulously guard. Our heart is the only proper

regulator of these contending passions ; it speaks the combined sentiments of humanity and of our love of God ; it is it which tells us to do to others as we wish them to do to us. It listens easily to the impulse of gratitude which shows us a friend in a fellow man, while it opposes a barrier to resentment by showing us a fellow man in our enemy. In vain do our thoughts, prompted by ambition, give to vengeance the character of justice ; virtue, in her turn, represents vengeance to us as belonging solely to the law, or rather to God. Let us then relinquish to the law the prerogative of imposing punishment for the ill that is done us ; reserving to ourselves gratitude for friendly actions, and taking it for granted that it is on that account that human laws affix no punishment to ingratitude.

We may rest assured that no injury remains long unpunished ; the history of all nations is replete with proofs to that effect. These have been collected and recorded by the most virtuous and celebrated writers, such as Homer, Xenophon, Tacitus, and Plutarch. The philosophy of history has been written with a view to clear it of error : the next thing to be done is to point out its moral lessons by way of giving it a specific object. The history of nations is no less replete than that of Nature with the evidence of a Divine Providence,

and human societies may be made as productive of theological lessons as the wonderful skill displayed in the humbler part of the animal creation.

Punishment, says Plato, follows the commission of an offence; if not manifest to the eyes of men, it takes place in the breast of the guilty person. Plutarch has written a very good treatise "on the reason why Divine justice sometimes delays the punishment of offences." He gives a very good answer to the objection of the Epicureans of his time, who, like those of our days, refused to believe in Providence because it not only tolerated wickedness, but even made it prosper. He replies that the wicked are often instruments of Divine vengeance on a corrupt people; that the longest life of man being only an instant in regard to God, it is the same thing, in the arrangements of Providence, whether the wicked be punished immediately on the commission of their crime, or twenty or thirty years afterwards. He adds that during life their remorse is such as to make them like criminals in prison, who have the halter round their neck, and know that if not executed one day they will be so the next; that the delays of Divine justice are in regard to them a consequence of its goodness in giving them time for repentance; and finally, that this apparent impunity proves the existence after death of another life, in which

every one shall be recompensed and punished agreeably to his actions.

Nothing can be more contradictory and more absurd than the idea that Providence neglects mankind, while its care is extended over all the rest of Nature. It is incumbent on us to form our rules of morality on an imitation of Divine justice. That such is our interest admits of little doubt; for as we are very feeble beings, we feel the want of the clemency of God and of the indulgence of men. "Canst not thou," said Marcus Aurelius, addressing his own mind, "have patience with the wicked whom the gods themselves have so long borne with. Thou desirest to fly from their malice, and thou art not prepared to forego the portion of malice that is in thyself. Yet the one is impracticable, and the other is in thy power." If then any one gives us offence, we ought to say to ourselves, Are we sure that we have not done the same? have we not sometimes slandered, despised, or injured other persons? True, but we may say it was not without cause. To this the answer is, that there is never just cause to go to such a length, or to act improperly towards our enemy, because he has done so towards us. Let us put ourselves in his place:—if we were the first to interfere with him or to give him offence, we have no ground of complaint. If we are innocent, he is mistaken in

regard to us, and cherishes groundless hatred. But even in this case let us act towards him as we should wish him to act towards us had we offended him; and we should certainly not wish him to take vengeance on us.

Such considerations as these will be very useful to us, particularly in regard to our manner of treating our inferiors, such, for example, as our servants. Any offence from them appears the more difficult to be borne both on account of the quarter from which it comes, and the possible frequency of its occurrence. Could we answer, that were we in their place we should be altogether submissive to the pleasure of others, or altogether zealous for interests in which we have comparatively little concern? "You act a proper part to your servant," says a philosopher, "and he returns it with ingratitude; you complain that he is capricious, perverse, and disrespectful; but, if he were a perfect character, do you imagine that he would continue in your service?"

The maxim, "Live with your friend as if he were one day to become your enemy," although founded on notions injurious to friendship, seems fundamentally just, inasmuch as the inverse maxim is true; "Live with your enemy as if he were one day to become your friend." It must be acknowledged that we are in the habit of opposing to this a notion of a very contrary kind; "Dis-

trust a reconciled enemy." But I set down this as one of the axioms which have been very needlessly multiplied in morals. The true way to put such axioms to the test is to examine them by their utility to mankind: if an axiom suits all, we may take for granted that it is sound, the interest of mankind being an infallible test of truth. Another means of arriving at the same end is when the inverse proposition is evident, truth being, like the sun, resplendent on every side. This being admitted, it seems nowise doubtful that we ought to be moderate in our attachments, as experience shows that they are sometimes changed into enmities, while enmities are converted into happy and steady reconciliations. The clemency of Augustus rendered Cinna his faithful friend. It is our passions which threaten breaches between us and our friends; it is virtue which draws us near to our enemies. Were virtue not to obtain for us their affection, it would unavoidably procure us their esteem. Hence the propriety of never saying of them in their absence what we should not choose to say in their presence.

The most effectual method of stopping the progress of enmity as well as of every passion, is to oppose it at the outset. Errors, whether of the heart or head, must be restrained in an early age, or our difficulties will be augmented tenfold.

Often do we meet with instances of irreconcilable hatred, which owe their origin to a mere sarcasm; a spark is sufficient to give rise to a great conflagration.

Volumes might be written on the application of these general principles; but enough has been said to show the dangers of our modern systems of education, since they are so much founded on exciting emulation, one of the most powerful stimulants of passion. Among children, emulation is nothing but the desire of taking the first rank, and of rising above one's fellows by superior progress in learning; among men it is likewise nothing more than the desire of taking a lead, and the points of distinction here are fortune and reputation. However, almost all the evils of society may be traced to an excess of this passion, to a selfish preference of our own views, and to the competitions and jealousies which that preference engenders. The emulation of children is fundamentally the same as the ambition of men; it is a root of the same tree. It is this lofty passion which Nature implanted in us with a view to our acquiring dominion over the animal creation, that we teach our children to employ against their equals, at first, it is true, in innocent exercises, but afterwards in more serious objects of contention. In the ambitious boy who throws himself down before an approaching vehicle to prevent

it from stopping his sport, I recognize that Alcibiades who prefers bringing ruin on his native country to a renunciation of his ambition and luxury; while in the youth who orders pirates to applaud his verses, I discover that Cæsar, who was one day to remain seated when the Roman senate came in full array to wait upon him.

Of all kinds of friendship none are to be compared to fraternal attachment. Nature has cast around this attachment the strongest bonds of connexion from our earliest years;—those of partaking of the same diet and the same instruction; of having before us the same habits and examples; and of experiencing in most things similarity of treatment. We have already taken notice that most living bodies have organs in pairs; Nature having given us two eyes, two ears, two hands, and two feet for the purpose of mutual aid. Had she given us only the half of these organs, we should have experienced, not indeed absolute impracticability, but a great deal of difficulty in providing for our different wants. Had she, on the other hand, tripled, quadrupled, and multiplied them, she would have made us like the giants in fiction, like Briareus, whose hundred arms impeded each other in their functions. She has accordingly confined herself to the gifts of two equal parts, not only in man, but in all organized beings; and the inference is,

that we ought not, like the materialists, to consider mere motion as the principle of life, but a fraternal harmony of two equal halves united in the same individual. This harmony is proved by the important fact that one of these halves cannot remain in life without the other.

It is an old remark that poor families, consisting of a number of children, often succeed better than those where the number is smaller and the property greater. This, according to some good people, is the consequence of God's blessing. God, no doubt, attaches a blessing to the fulfilment of his laws; and the law, in the present case, is that of fraternal harmony. A numerous family is successful generally because the brothers afford mutual assistance to each other. I find in the *Odyssey* a very affecting sentiment on this head, when Telemachus reckons in the number of his disappointments that of not having a brother. Homer, possessed as he was of a feeling heart and of a profound knowledge of human nature, in putting this complaint into the mouth of him who was seeking his father, no doubt felt that fraternal love was strictly connected with filial attachment. Children bear evidently a resemblance in looks and shape to their parents, and some persons imagine that, in a numerous family, each individual is characterized by a particular trait of the physiognomy and temper of

his parents. The one is said to have their smile; another their look when serious; a third to have their manner of sitting or walking. Be this as it may, certain it is that these resemblances, whether real or imaginary, have a tendency to consolidate affection in families, and to make good our argument in regard to the intimate connexion between fraternal and filial love.

Though friendship calls for a conformity in point of disposition, it admits likewise of contrast, without which indeed it could hardly subsist. Difference of age between brothers makes something of the distinction of which I am now speaking, and which, though at first it may appear a motive for separation, is in fact a ground of union. Our fingers are enabled to perform their respective offices, and to aid each other better than if they were all of equal length and strength. The thumb presses by its strength what the others grasp by a combined effort, and the little finger closes our hold in a manner which it could not do if equally long with the others. Whatever inequality therefore there may exist between the talents and conditions of brothers, there is only one thing to impress on them, namely harmony, that they may be all enabled to act in concert. Let parents and teachers be careful to avoid the excitement of jealousy between brothers when at play. Plutarch, in his essay on brotherly love,

observes that as the “divisions which caused the ruin of Greece arose from the rivalry of some powerful citizens in regard to preferences given to buffoons and other such trifles;” in like manner the jealousies arising between brothers often begin on account of birds, petty chariots, and other play-things; and that these jealousies become inveterate, as their years advance. Instead, therefore, of giving children separate amusements to prevent bickerings and animosity, I would prefer taking the opposite course of making their amusements, and their little property, in common, with a view to accustom them to live together in future years in harmony and cordiality. Separation of property, even in play-things, is apt to give premature notions of mine and thine, notions of the most dangerous kind between sons and brothers. To this we are to add the natural desire of whoever happens to have his little property damaged or broken to lay hold of that of others. These are, in fact, the general source of quarrels among children as among men.

However, if we think it expedient to give brothers amusements in common, we must be careful in the choice of a profession to keep them distinct, that we may remove from them all ground of rivalry. The love of pleasure forms a bond of union among men, in the same way as interest has a tendency to create separation. Amusement

calls for companions, but ambition refuses them. All passions are of an unsocial character. Moreover, as the inclinations of children are very various, we should give each of them full liberty to follow his own. Castor and Pollux, so celebrated for their union, were celebrated likewise in war; but the one excelled on horseback, the other in combating with the cestus. I may, however, appeal to an example of brotherly love vouched by authorities more within our scrutiny than those which relate to the twins of Elis; I allude to the two brothers, Peter and Thomas Corneille. They were both tragic poets, that is, they belonged to a profession which brooks rivalry worse than any other. They lived together during life, and never thought of making a division of their paternal inheritance until their time of marriage. They occupied a small house at Rouen; Thomas lodging on the ground floor, and Peter above him on the first floor, which communicated with the other by a small staircase: each pursued his labours in sight of the other. Thomas excelled in finding a number of rhymes to the same word; Peter did not possess this facility, but, when at a loss for a rhyme, addressed his brother, who gave him forthwith his choice. The intimacy of their friendship appears to me a still more remarkable thing than the extent of their talents, particularly as they

were not on a par in point of reputation. That these celebrated poets should have lived in the common enjoyment of property, pleasure, and labour, is to be attributed partly to that superiority to jealousy which exists in men of distinguished talent, partly to their having been brought up together under their father's roof. The anecdote I have just mentioned was repeated to me by M. Mustel a native of Normandy. The small dwelling of the brothers was still standing in my infancy : I do not know if it is still in existence ; the Greeks would have made a temple of it dedicated to the Muses and to brotherly affection.

As the picture of vice is so hideous that it renders virtue still more amiable, it is proper to relate to children the histories of bad brothers, who by their antipathy have caused each other's ruin. Such were Eteocles and Polynices, whose implacable hatred arose from their emulation for the possession of power. Ambition in its outset looks fair, but when the spark is kindled, it becomes a devouring flame which consumes all, even him who has favoured it. The first eruptions from this volcano consist in envy, intolerance, calumny, and a quarrelsome disposition. If you perceive such feelings in your brother, endeavour to bring him back to virtue by your affection, and still more by your example ; but if your efforts are ineffectual, avoid him, for he is

tainted with a contagion, and your duty to your fellow-creatures is of a still more imperious nature than the dictates of fraternal affection. The virtuous Timoleon dissuaded as much as possible his brother from endeavouring to usurp the supreme power in Corinth, and when his efforts were ineffectual he made no hesitation in abandoning him. He repented, it is true, giving his consent to his death; but Plutarch blames him for that remorse as a weakness, and seems in this respect to differ from the opinion expressed by him on the severity of Brutus towards his sons. For my part, I have no objection to witness a contest between two vices, because the destruction of one of them makes way for a virtue; but my feelings are very different in regard to two virtues, as vice can hardly fail to result from the sacrifice of one or the other. Hence the danger of putting patriotism in competition with paternal or fraternal affection: to raise a civil war between virtues is like raising it in heaven; it belongs not to man to reconcile them, but to God. It is enough that we undertake to regulate our passions: to support the foundation of the edifice, or to reinstate it, when shaken, seems the province of the Author of Nature. We address our prayers to him daily to prevent us from trespassing, lest we should become foolish in our imagined wisdom; unjust while we thought we

were acting justly, and cruel from excess of humanity. If then we are so unfortunate as to have a vicious and incorrigible brother, there is nothing to be done but to put up with him, or to shun him. If our country places us in a situation where it is a duty to look to the execution of the law, let us prevent him from any infraction on the law; but if he has committed any trespass which calls for punishment, let us rather wave the application of the law than shed his blood. In the reign of Vitellius, a brother killed his brother of an opposite party in battle, and claimed a reward: Tacitus observes that it was refused under pretext that they had it not in their power to recompense him. Let us feel a hatred of vice even in our brother; but let us cherish affection for a brother though vicious. God has placed on earth two gates leading to heaven; he has placed them at the two extremities of life; one at its entrance, the other at its termination. The former is that of innocence, the latter that of repentance; and it would ill become brotherly affection to close the access to the latter. There are not wanting examples of brothers who, by the mere influence of affection, have succeeded in reclaiming a vicious brother. The history of China presents us with several of this description taken from infancy itself; among others that of Xuni the successor of Vaus, one of their most cele-

brated sovereigns. Xuni was of a humble station; having a father and brother of a character the reverse of amiable, he succeeded in operating a reform in them by dint of patience. Vaus, struck with this display of virtue, called him to the throne, and is said even to have set aside his own children in his behalf. Fraternal harmony is a particular object of attention in public instruction in China; and the government is still more desirous to collect traits of virtue in children than in grown up persons. It looks on schools as nurseries, where seeds sometimes give excellent fruits of a new kind, without waiting for aid at the hand of the cultivator. It considers the virtues of children as gifts of Nature, while those of man are often but the consequences of the refinement of society.

In quoting examples to children, I should prefer citing vicious characters among strangers, and the virtuous from among our own countrymen. It was in a great measure by this method that the Greeks and Romans increased the patriotism of their youth. In point of fame, no country can boast like Greece; her rocks are more famous than our mountains; her streams, than our rivers; and her Mediterranean, with its Archipelago, than any of the extensive seas traversed by modern navigators. The Chinese went likewise great lengths in the plan of intro-

ducing virtuous characters from among their own nation ; for they say that their history furnishes no less than 3636 men, illustrious for virtue or for talents, useful to the state ; and 208 females, who, whether as maidens, wives, or widows, were celebrated for the virtues of their sex. The inscriptions, the monuments, the statues, the temples, the triumphal arches, raised to these distinguished characters on the spots where they were born, or on those where they had passed their life, are seen ornamenting, in all directions, the great roads, the mountains, the forests, the rivers, and the cities. Add to this their historical eulogies, the dramas and poems made in honour of them, and diffused throughout every library, and even in schools, and you will have some idea of one of the principal causes of the long duration of this empire, and of the strong attachment of the Chinese to their country. The illustrious examples of the virtues of their ancestors constitute the moral cement which keeps together all the parts of this ancient edifice ; it has by these means been enabled to resist the effects of Tartar invasion, and the no less formidable dangers of foreign idolatry. The Chinese, it is true, have no proper idea of the value of foreign nations ; and, like the Greeks and Romans, are apt to look on them all as barbarians ; but does not modern Rome govern, in like manner, whole

nations by the lives of her saints, which she holds up to their imitation? And does not the example of a Vincent de Paul serve to create respect and even attachment to her power? As for us, whose object it is to rear young people, not for their own village, but for the world at large, we are of opinion that examples of virtue may, without impropriety, be sought in foreign countries; but that our own should have the preference when they offer such as are appropriate and remarkable. This preference is a filial duty which we ought to discharge towards our country, and by which we should begin to cherish affection for mankind at large. The attachment of Cato of Utica, to his brother Lepidus, was not more affecting than that of Turenne to his brother the Duc de Bouillon. That celebrated commander declared aloud that he was indebted to him for the greatest part of his knowledge; that he undertook nothing without consulting him; and it is well known that he was extremely affected at his death.

Our observations on the affection that ought to prevail among brothers are applicable to those which should reign between sisters. Women are at least as susceptible of affection as men; and examples of this nature would be frequent in history, were it not the practice to give more attention to those brilliant talents which often cause

the misfortunes of nations, than to the obscure virtues which form the foundation of family comfort. The love of sisters to each other is at least equal to that of brothers in point of disinterestedness and tenderness, while, in delicacy and attention, it is far superior. If friendship be at bottom nothing else than a union between two feeble and suffering beings, women are more strongly called on to cherish it than men, because they have more wants and weaknesses. The love of Orestes and Pylades, who wished to die for one another, is, in my eyes, less affecting than that of Myro and her sister, daughters of the tyrant of Elæa, who, though innocent of their father's crimes, were condemned to death in the flower of their age and beauty, and entreated each of the other to be the first to meet her end. The elder had put her girdle around her neck, and had desired her younger sister to look and to follow her example, when the latter entreated her not to expose her to the sorrow of seeing a sister expire. On this Myro took the fatal cord, fastened it on the neck of her younger sister, and embracing her, said, "O my dear sister! I have never refused you what you have asked of me; receive this the last and strongest proof of my affection." Then, after seeing her expire, she covered her body, and before inflicting death on herself, she entreated the spectators, who, notwithstanding

their hatred against tyranny, were melted into tears, not to allow the commission of any dishonour to their bodies after death.

If there is not among the women of antiquity any record of friendship so celebrated in history as the fraternal love of the Gracchi, it is owing to females not exposing themselves in political struggles. Their difficulties, though less conspicuous, are not less serious; for they have often to contend against infirmities, poverty, old age, and other hardships, which are the more difficult to bear because one gets no glory by supporting them. How many sisters have continued irreproachable in their friendship until the weight of years has brought them to the tomb?

But there is a harmony still more strong and affecting than either that of brother to brother, or sister to sister, I mean the reciprocal attachment of brother and sister. In that of brother to brother, or sister to sister, there exists a correspondence of situation; but in the last mentioned there is, to a certain degree, a correspondence, and in another respect, a contrast. Attachment between men has frequently something rough, hasty, or uncivil; and that of one sister to another may be tinged by weakness or by jealousy. But the affection of brother and sister is a harmony of weakness with protection, of beauty with strength, of confidence with frankness. I have often

observed that, in families where there was one brother and several sisters, the brother was, beyond contradiction, milder and more polished than young men in families where there were only boys; while in those which consisted of a sister and several brothers, the young female possessed more knowledge, more strength of character, and less inclination to superstition, than in a family where there were none but daughters.

Plutarch, in his *Essay on Brotherly Affection*, quotes only one example of attachment of this nature. A woman, having been offered the alternative of choosing between the death of her brother and her son, is reported to have preferred saving her brother, saying, "I may have another child, but I can have no other brother, both my parents being dead." The conduct of the Sabine women is as much to be attributed to affection for their brothers as for their husbands, when they threw themselves with dishevelled hair, and with their children in their arms, between the warriors who were on the point of sacrificing each other, and when they succeeded in making them lay down their arms by calling, as Plutarch says, now on the Sabines, now on the Romans, by the most endearing names which exist among mankind. We may cite, likewise, the example of the virtuous and unfortunate Octavia, the sister of Augustus, and the wife of Antony, whose

affection for her brother and husband served long as a barrier to the ambition of these two rivals ; but when Antony, blinded by his passion for Cleopatra, had violated the ties of conjugal affection, and driven his wife from his house, her mediation was at an end, and the Roman empire soon passed under one master.

Whatever may be the speculations of politicians, it is certain that moral harmonies form the great chain that links together all the departments of human society. Fraternal harmony operates strongly in our infancy ; and, with us, the state of infancy lasts longer than in the case of any animal, in order to form and strengthen the first bonds of society by maternal love. But it is conjugal attachment that unites the whole human race. It comes forth decked with the enchantments of love, and it is from its bosom that those affections spring which unite children to their mothers, and men to their country.

BOOK VIII.

CONJUGAL HARMONIES.

LOVE is, in children, a moral sentiment, which manifests itself in them long before they are aware of the distinction of sex. They have greater sensibility and acuteness in discovering a pleasant and comely countenance than we should imagine. Rousseau told me that the writers in the French Encyclopedia having given a ball where he happened to be present, the plan was to begin by Fontenelle, then above ninety years of age, and a pretty little girl of seven or eight. Scarcely, however, had the child cast her eyes on the wrinkled forehead and sunken cheeks of Fontenelle, than she drew back her hand, and burst into tears. The Nestor of philosophers was hurt, thinking it, no doubt, strange that he, who was in such request among all classes of society, should be shunned by a child, alive only to the instinct of nature. He was then rendered conscious, notwithstanding the remaining vigour of his mind, of the decrepitude of his body, by the fright into which it

put a child ; and he received the serious lesson, that the two extremes of our career form an unpleasant contrast in the commencement of life and at the approach of death.

Children, however, seek with great ardour the society of children of their own age, and the prettiest are always the most welcome ; their affection is often fixed on a single companion to the exclusion of the others. It is curious to see a little girl desirous to make herself agreeable to a boy, but still keeping a certain distance, while he thinks of nothing but of doing what can please her. Who has not taken delight in observing children engaged in their amusements, in listening to their promises of perpetual cordiality, in observing their little jealousies, and the disquiétudes of which they are productive. The degree of attachment between one child and another, and their consequent disappointment when any thing interferes with its gratification, is much greater than people in general imagine. A philosophic eye may trace in these early habits the origin of future character. Hardly is a little girl able to walk, before she takes a pleasure in looking at herself in the glass, and in adjusting her dress ; she watches her doll with a kind of maternal care. She delights in singing almost from the moment that she is able to speak, and of all kinds of songs, she prefers those that are

indicative of affection. A boy, on the other hand, neglects dress, and thinks chiefly of arms and active exercise; he takes a pleasure in extracting a sound from drums and trumpets; in running, leaping, and climbing; and he is supremely happy when he has at his disposal a wooden sword or sabre. Even in these early years, we see a marked contrast between the sexes, the one absorbed in the thought of exploits, the other in sentiments of affection; the one is evidently made to protect, the other to be loved and protected.

Let us then endeavour to lay before each the duties resulting from affection, before the purity of the natural feeling be tainted in them by the manners of society. Let us show them the laws which regulate affection, as they are displayed in all the works of Nature, which unite the one to the other by conjugal harmony. Let us open a passage to the torrent at its fountain head, that when it comes to descend from the mountain, it may not ravage the lands which it ought to fertilize.*

It was in vain that Divine Wisdom established harmony between the shape and colour of created objects; all remained without motion and life, because all was without love. For the same reason the finest painting offers only surface, and the most beautiful sculpture nothing but immobility:

because they are the works of man's hands and devoid of life. In vain would new artists attempt to give motion to the products of their labours, either by means of fire, or of the loadstone; they would find the most skilful organization ineffectual, and would acknowledge at last that life is an element of heaven. To God alone did it belong to grant it, and it was love which he thought fit to vest with this power. He shook his torch over the universe, and the worlds which compose it were kindled with the eternal fire. The earth, then dark and icy, became subject to the attraction of the sun, and, rolling on her own axis, presented to him each of her hemispheres in succession.* Her ocean now withdrew within narrow limits, and flowed around her: her atmosphere was enlivened, and opposite winds flew on different horizons. Clouds rose over her seas, and, after receiving the solar rays, streaked the air with gold and vermillion; or falling to the ground in fertilizing showers, their contents ran in rivulets down the sides of mountains, spread plenty over the plains, and united themselves once more to the ocean. Vegetable products now became covered with flowers and fruits; birds built their nests under their shade, and made the echoes resound with a thousand songs. Man, delighted with the sight of so much beauty, knew not whither to carry his uncertain

steps, when he felt himself attracted by a creature who seemed his other half; who was like to him and yet different from him: she possessed in beauty what he had in strength; she united all that adorns the objects of Nature in mild colouring, in shape, and grace of motion. He addressed to her his first words, and expressed his most lively affections: she replied by still more melting words and more tender feelings; like the moon reflecting the solar rays by a milder light. He approached her, and she stopped; he offered her his hand, and she, in return, presented hers; she discovered confusion, and he felt confusion in his turn. The sight of the universe had taught them the knowledge of a God; love gave them an assurance of his existence by the testimony of their hearts.

In the beginning of the world, all the harmonies of creation must have dated from the influence of the solar rays. The same cause must have given a simultaneous beginning to night and day, winter and summer, spring and autumn, rivers and glaciers, sands and rocks. There must have sprung up forthwith grass fit to serve for pasture to animals, and trees to afford them an asylum; but in the sequel the periods of life were regulated by the revolutions of the earth; and each being went through them in his turn,

however different the duration of their respective lives.

The moon seems in particular destined to preside over love ; and it was not without reason that, among the ancients, some considered her as Venus, while others addressed prayers to her to grant safe deliveries to mothers. In India the bamboo produces every lunar month a new shoot, and the cocoa-tree a new branch of fruit ; the orange-tree yields fruit at each equinox : other vegetables at each solstice ; many once a year, and some once in two years ; but the greatest number are regulated by the equinoctial seasons and the lunar months. These laws extend, no doubt, to the vegetable products of our climates, and their operation is visible in the seasons of love in animals : those of fishes are generally regulated by the principal phases of the sun and moon. Although the rule does not seem to be quite absolute in its application, we shall find that almost all sub-lunary beings are in this respect in harmony with the sun, the source of warmth and the primary mover of life. The apparent exceptions from this rule are no more contradictions of its existence, than the apparent differences between the revolutions of the earth and other planets argue that any of them are unconnected with the orb of day. The sun is in

this vast machine of the universe like a large wheel, which gives motion to a number of smaller wheels, not together, but in succession, and agreeably to the connexion that each of them has with him; and perhaps agreeably to the latitude in which they were at first placed.

The study of these laws may enable us to acquire a knowledge of the vegetables and animals indigenous in each climate. The fir and cedar do not come into flower till June; the walnut, on the other hand, a native of India, gives its flowers before its leaves, in April, in the same way as the hazel-nut. The rein-deer of the north seeks the female at the autumnal equinox, because at that season the snow is entirely melted at the northern regions, and he has been for some time in the enjoyment of abundant pasture. He is formed to live in the farthest limits of our habitable globe; and his loves may be said to begin at the farthest limit of our summer. The life of carnivorous animals being, in some degree, engrafted on that of the frugivorous, occupies a wider range, and fills the whole round of the year as they fill the circumference of our globe. The regions of winter and death are frequently the cradles of these destroyers of life. They come together in the season which offers them an abundance of prey, and which proves fatal by its rigour to a great number of beings, whose life is

but for a twelvemonth. It is thus that the fox makes winter his season of love, and that his young are brought forth in April, the time when frugivorous animals only begin to conceive in our climates. The fox is covered by Nature with warm furs, and is, of all quadrupeds, the one who lives in the most remote countries of the north. By means of the light of the moon, and of the Aurora Borealis, he goes through the long nights of the frozen zone, which frighten the white bear, and force him to draw near to countries cheered by the sun, from whose rays he seems unwilling to withdraw. This favours the opinion that lunar influence affects the loves of the fox in winter at the pole, in the same way as those of nocturnal animals in our climates. Providence has made the moon to rise in the sun's absence on these desert and frozen regions, (where, when in her full, she never disappears from above the horizon,) and has judged wise that there should be animals there to enjoy habitually her light.

Man arrives, we are told, at puberty at the age of twelve, in the torrid zone, and at sixteen in the frozen zone. We are told likewise that, in certain parts of Africa and India, females are capable of being mothers at the early age of ten; and that they cease to be so at thirty. If that be the case, there is no truth in the assertion of

Buffon and others, that the season of growth bears a proportion to the length of life; for, if the infancy of man be shorter in warm than in cold countries, his old age ought likewise to be earlier, and the whole of life proportionally shorter. This, however, is not the case; Indian Brahmins live sometimes to the age of one hundred, and old men are not more frequently met with in such cold regions as Russia than in warm countries. Moreover, I have observed at the Isle of France that children of ten or twelve, of either sex, even among the negroes, were neither stronger nor more completely formed than those of St. Petersburg at the same age; and that it was not till eighteen or twenty, that either male or female acquired their full stature and strength. Women in all climates attain that strength and stature sooner than men, and, in like manner, lose earlier the power of continuing the species. Mothers find protectors in their sons grown up, at a time of life when a father may frequently see young children added to his charge. That Providence, which connects all generations with each other, has perhaps ordained that the cares of a mother should extend to her grand-children; and that she should aid her daughter with her experience and her cares, in their long and laborious education, in the same way as she had herself received aid at the hands of her own mother.

Be this as it may, it is a well known fact that children are born at all seasons in whatever latitude; a circumstance deserving of notice, because it forms a distinction between man and almost every class in the inferior part of the animal kingdom.

Although conjugal harmonies may be said to exist in the works of Nature all the year through, the month of May is the season when their reign is most conspicuous in our climates. Towards the middle of that month, the sun is twelve degrees north of the equator, while the moon is at twelve degrees south; leaving between these orbs a distance equal to half the torrid zone. At that time we receive a portion of his influence; and we enjoy the whole of it when, towards the end of June, the sun at the summer, and the moon at the winter solstice, embrace all the space contained between the tropics.

In summer the sun not only dilates our atmosphere, but evidently exercises a similar power on the sea. If heated air rise in a thermometer, the ocean must, in like manner, experience elevation in its basin, and augment its slope: if a rod of iron becomes lengthened by being heated, it follows, in my opinion, that the terrestrial hemisphere, replete as it is with mineral substances, must be dilated so as to increase the slope of water towards the opposite hemisphere.

Let us cast a glance on the harmonies of the powers of Nature in the month of May, and we shall see them combined like those of the two orbs. The sun, who is the first mover of all harmony, is partly absent, and partly present; hence the distinctions of light and shade, heat and cold, dawn and even, day and night, summer and winter. His rays are, in the next place, blended in our atmosphere, and as they dilate it in proportion as they rise above our horizon, they make it move from the north towards the south, where it is most rarefied; which is perhaps the reason that the month of May is never hot intensely, or for a long time, in our climate. It often happens that in this month, and during a part of April, a drought prevails, and the plants which stand then greatly in want of water, because they are in all the activity of vegetation, would languish, did not Nature make up for the absence of rain by an abundance of dew. These dews are owing partly to a kind of perspiration in the soil, soaked as it has been with rain during winter, and now warmed with the sun; partly to the freshness of the atmosphere, which, during night, condenses the vapour on the plants under the form of dew, so as to reduce it sometimes to a hoar-frost. This contrast of heat and cold seems more favourable to the vegetation of plants that are indigenous to our climates, than a warm

atmosphere ; for they grow with more vigour in these months than in the warmer part of the year, and the violet is found more lively in colour, and of a stronger scent, on the borders of the Alpine snows than in the plains of Roussillon. The contrast of light and air is perceptible, particularly in this season, on the clouds that are condensed both by the cold of the upper atmosphere, and by that of the north wind ; for it is at this time of the year that they shine with the richest colouring at the rising and setting of the sun.

The earth and ocean are connected and combined somewhat like air and light, but in a different proportion. Light proceeds from one point only of the firmament, while air forms around the earth a complete sphere which collects and modifies it like a convex glass, or like the crystalline humour of the eye. But the ocean and the earth have each its hemisphere. The former, towards the south, is mixed with land ; the second, towards the north, is mixed with water in unequal parts, but in the same proportion.

Although the ocean is of greater extent than the earth, the seas and continents of the globe are interwoven in such a manner that, when winter prevails in our hemisphere, warmth is brought to the ocean from the aquatic hemisphere, which, being in its summer, sends its polar ice

northward. Again, when winter prevails in the southern hemisphere, the ocean is, in some measure, warmed by the flux of water proceeding from the melting of the snow at our pole, and running southward across the torrid zone. This seems the cause that the winter in the straits of Magellan is much more temperate than the summer, as was observed by Forster on considering the state of vegetation. This strait receives in summer direct currents from the frozen ocean, and in winter similar currents from the torrid zone. The same reason seems to temper the winters of the coasts of Norway, England, Normandy, and Bretagne, in all of which the degree of cold is less than in the interior of these countries, while in summer the degree of warmth is also less. Myrtles grow naturally on the coast of Normandy, and the fig-tree does not freeze there in winter; but it is with difficulty that vines can be brought to ripen there in summer. It would be difficult to explain, otherwise than by the influence of currents from the poles or the equator, the difference of temperature in isles of the torrid zone situated in the same latitude, and with the same elevation of atmosphere. The Molucca Islands are much warmer than the Antilles, because the projection of Asia towards the east appears to prevent them from being

visited directly by the cool currents proceeding from the north pole in summer.

Rivers have nearly the same connexion with their islands, as the ocean has with continents ; I mean that each affects the degree of heat and cold of the tracts along which they roll, and that they in general increase their fertility. I might enumerate other sympathies or relations between land and water, such, for instance, as that water, by its reflections, affords an image of the adjacent land, while the earth, by its echoes, repeats the motion of water. These correspondences and contrasts are the source of a multitude of delightful harmonies ; they are the source likewise of the pleasure which we find in performing a land journey in the neighbourhood of water, and a sea voyage along a coast. Certain it is that they add greatly to the enjoyments of life. It would be a curious point to ascertain whether the superabundance of life which is diffused during the month of May over our atmosphere, and manifested by the colours of the firmament, by the perfumes of the atmosphere exhaled from vegetables, by the currents of limpid streams, by the flowering of plants and the loves of animals, is not in some degree communicated to fossils. It would be of some moment likewise to know whether the power of the loadstone was not

greater at that season ; a question which to some persons may appear idle, but they would do well to recollect that, when Columbus proceeded on his voyage of discovery, he perceived that the compass, which during the night pointed to the north west, approached the polar star in the morning. This great man was perhaps the first who observed its variation. If then the loadstone experience regular changes at certain hours of the day, as has been ascertained by other naturalists, why should it not experience them at certain seasons of the year ?

Be this as it may, conjugal harmony in our climates prevails among all organized beings, particularly in the month of May. Its beginning takes place among vegetable products. When, after a certain lapse of days, months, or years, they have acquired the admirable property of re-producing themselves, they become adult, and display the sexual organs contained in their flowers. It is easy to distinguish those of either sex ; the organs of the male being formed of small, oval bodies, or lobes called anthers, suspended in equilibrium to filaments called stamina ; they are yellow in the flower of the lily, and black in the flower of the tulip. The name of anther is derived from the Greek *Antheros*, one of the names of Cupid, who, according to heathen mythology, was the son of Venus and Mars. If

that name was given to the parts in question by the Greeks, to whom we are indebted for the first terms of botany and of almost every science, the circumstance would seem to argue that they were acquainted with the existence of sexes in plants, the part in question containing a dust which impregnates the female sap. This organization, which arises from one of the fundamental laws of Nature, was so little understood by Tournefort, the great restorer of our botany, that he never considered the pollen or fertilizing dust of the anther otherwise than as an useless excrescence. From this we may conclude two things; first, that the ancients were not strangers to several of the discoveries of which the moderns are proud, and next that the latter should never state, in opposition to such a conclusion, the ignorance or the error of any particular man of science, whatever may be the extent of his erudition; for, in other respects, Tournefort was in botany nearly as great as Newton in astronomy.

In the middle of the anthers is generally found the uterus or female organ of the flower, called pistil, perhaps from the Greek word *πίσις*: it is evidently a small tube intended to receive the dust of the stamina. It consists of three parts: the stigma, a kind of cleft which receives the pollen; the style, a tube leading to the germen; and the germen, which contains the seed or fruit.

All these parts are of great sensibility in most flowers, such as those of the lily and apple tree, which are nothing else than an accumulation of a number of males divided and arranged circularly around the pistil which combines several females. It deserves to be remarked that the anthers or male parts protect the female part by surrounding it and covering it until the time of its opening. We have here an example of the same protection afforded by the male to the female in the vegetable as in the animal creation. In many vegetables, the male parts are separated from the females, and exhibit flowers of different shapes ; such are those of the filbert, chesnut, melon, &c. in which the male flower is distinguished from the female which bears the fruit, by putting forth a yellow dust which serves to convey impregnation. The male flowers of the filbert, which appear in winter, appear under the shape of caterpillars suspended to branches ; and the female flowers, which produce the nuts, are to be seen on the bark in small filaments of bright purple.

In other vegetables, the male and female flowers are separate, and occupy distinct plants or trees ; this is the case with the date tree, the papaw, the pistachio, the elm, &c. It deserves to be remarked, that the male trees of these species are higher than the female, in order perhaps that the wind may bring fertilizing dust to the latter.

The impregnation of the female takes place from a great distance, and often by the intervention of insects ; among others of bees, who collect on the male trees the pollen with which they compose their wax, and proceed afterwards to the female trees to collect the honey of their nectaries. The nectary is a reservoir, containing what is called nectar, a liquor more or less saccharine ; it is generally situated in the corolla at the lower part of the petal, and is covered with a small scale. We are not apprized of its use in regard to the plant, but it may possibly serve to nourish the seed when in the state of foetus ; at all events it clearly serves to supply the wants of a number of insects, such as bees and butterflies. It is, no doubt, on this account that Nature has in general given vegetables many more flowers than fruits.

The corolla, so called because it often resembles a crown, is the name for the petals taken collectively ; the petals are thus leaves of the corolla, and form the most brilliant part of the flower. Their use is to preserve the sexual parts, which they surround, from injury from the air and rain ; but they have a more extensive use, and one not yet mentioned, as far as I know, by any botanist ; that of reverberating the solar rays on the sexes of the flowers, and thus accelerating the process of impregnation.

Nature, after warming the sexual parts of

plants by means of a corolla, protects the latter by a calyx. The calyx is so called from the Greek word signifying a cup, though it has not always that shape. It is the outer covering of the corolla, and serves to keep it up when it is flaccid. It is fleshy in the rose, and divided into five parts ; it is then called perianthium, from the Greeks words περι and άνθος. It is proper to observe that insulated flowers, such as the tulip, have, in general, no calyx ; but those that grow in bushes and on branches, where they are likely to rub against each other in consequence of the wind, are more or less protected by such coverings, which do not always go under the name of calyx, but are called respectively perianthium, involucre, spathe, chaff, catkin, and calyptra.

It is when in flower that plants have attained all their beauty ; it is, likewise, by their flowers that botanists are accustomed to characterize them. Yet they do not arrive at a complete state until the time of their bearing fruit. Linnæus has characterized plants by the appearance of their flowers ; Tournefort, with more propriety in my opinion, by that of their fruits.

Conjugal harmony not only links together vegetables of the same sex, but approximates genera of them by means of contrast, in the same way as fraternal harmony unites their species by points of correspondence. How then can we

understand the relation of species to species, or genus to genus, since we have hitherto scarcely studied the relations which exist between the members of an individual plant? Yet these species so diversified, these genera so different from each other, and even the powers of Nature involved apparently in perpetual contests with each other, are but members of a great body, all of which maintain a mutual correspondence. Books have not yet been written to guide us in this department of the study of Nature; let us consult therefore our heart, and be guided in our scientific researches by circumstances which we find calculated to convey pleasant sensations.

I have already mentioned that we experience much gratification by looking at a groupe of trees planted in the same order as that of their seeds: this pleasure is afforded us by a clump of pines arranged in a conical form on the top of a mountain, or by a vineyard disposed in the manner of a bunch of grapes around an eminence. A more lively pleasure, however, takes place when we see different vegetable products contrasted with each other, such as the solemn fir of the north standing beside the green birch, and the creeping vines of the south adjacent to the tapering poplar. An old oak, braving the rage of tempests, and withstanding the lapse of ages, is in itself a very interesting object; but it ac-

quires double attractions when a young honeysuckle surrounds its hollow trunk with garlands of flowers.

The harmony which I have called conjugal is the source of that gratification which we experience when we meet, mixed by the hands of Nature, the reed and the nymphæa along the banks of rivulets; in the meadows grass and trefoil, the alder and the willow; on the borders of woods, the primrose and the violet; and in their interior, the ivy and ash. Some persons imagine that there are antipathies as well as sympathies among vegetables. The *mucor*es, the mosses, the misletoes, the agarics, the scolopendras, and most parasitic plants, seem produced for the purpose of undermining and destroying others; but vegetation exercises only an innocent power. A war of this description does not enter into the plans of Nature; a beneficent Providence has not done good for the sake of affording scope to the operation of a mischievous power; he has put limits to the vegetation of plants, not in the way of consuming each other, but in the wants of the animals which feed on them. The thorns with which some of them are provided are only their defensive armour; they are of no use for an offensive purpose, and if they do any harm, it arises from the imprudence of those who come too near them. Plants, such as mosses and

lichens, which live apparently at the expense of trees, seem to me likely, whatever may be said to the contrary, to be useful to these trees, particularly in protecting them against the severity of cold. Firs and larches in the farthest regions of the north have their trunks and branches covered with them as with a long fleece, and continue, notwithstanding, to grow with great vigour. If the ivy sometimes causes, by its embrace, the death of the young tree which it clasps, it would be foolish to account for it by the supposition of any intention on the part of Nature to set up one vegetable against another. The ivy, so far from exhausting its associate by absorbing its substance, appears even after its death to protect its remains by covering them with its perpetual green.

On observing the loves of animals, we find them take place chiefly in situations where Nature retains more of her primitive form than in the fields or plantations adjoining a habitation, and fashioned by our hands. They seem to give a preference to places where the hill is in harmony with the river, the wood with the meadow, the majestic tree of the forest with the humble bush. It is amongst the echoes of the rock and the reflections of the stream, that they take a pleasure in attracting, by a display of the beauty of their shape, or the harmony of their voice, the objects

of their attachment. It is there that the heath-cock at the bottom of the pine, or the water-fowl amid the reeds, are seen in converse with their companions. Our systems of botany and zoology do not treat of the harmonies of vegetables ; but the pleasure of which they are productive appears to me a proof that Nature has spread such laws throughout all her works, and created a sensibility to the beauty of harmony in every heart.

Conjugal harmony is of much greater extent in the case of animals than of vegetables. Ephemeral insects attain maturity in the space of a few days ; others at the end of a lunar month, of a season, of a year, and perhaps of a number of years, as in the case of the vorticella, rotatoria, or *rotifere*, which can remain for ages in a state of lethargy, a state which in fact is neither life nor death. The periods of existence are regulated by the revolutions of the heavenly bodies. A few animals, like the snail, appear to unite the sexes in the same individuals ; yet this animal cannot reproduce its species alone ; it requires another similar to itself, and two generations are the consequence of a single union. Voltaire mentions the curious circumstance, that the species called in French *incoque* can reproduce a new head, when its own is cut off. It deserves to be noticed likewise that this insect is blind, and throws little darts at the object of its affection.

There seems no doubt that the reason why Nature has united the organs of the two sexes in most flowers is, that plants being insensible, and without the power of motion, are, of course, incapable of communicating with each other. The case is otherwise with animals, endowed as they are with feeling and with the power of motion. When the sexes happen to be separated in vegetable products, and situated, as in the case of the palm tree, in distinct individuals, Nature appears to make use of flying insects, which collect the pollen and convey it to the female. This explanation, odd as it may appear, seems to me attended with more certainty than that which attributes the same effect to the winds. But as animals are endowed with passions, and are capable of going where they choose, there results from their loves a moral order to which Nature makes their physical order subservient. An animal capable of self-reproduction would confine his attachments to himself, and would form a link distinct from the great chain which connects the animal kingdom.

It seems, however, that the little insect called the vine-fretter, whose almost innumerable species are found in every direction, has the strange property of re-producing its young alone, although there are, among this class of animals, males which have wings to carry them wherever they

choose. M. Bonnet has given us a very entertaining and satisfactory account of the experiments he made in this way. He received a vine-fretter at the time of its birth, and reared it alone. It produced young without having had any opportunity of connexion with another of its species, and one of the young, being sequestered in like manner, produced a new generation, so that Bonnet obtained no less than five successive generations, without the aid of a male, in the short space of five weeks. He went on and got a seventh, and even a ninth, generation in the course of the summer. He concluded that these successive generations were produced in the first mother by the male which had impregnated, in autumn, the egg from which she came forth in the following spring; for it is very remarkable that the vine-fretter, which is viviparous in summer, becomes oviparous in autumn.

From all this we are to conclude that general laws are not absolute in their application, but subordinate, occasionally, to particular laws. The vine-fretter, a defenceless and very delicate insect, destined to serve for food to an infinity of insects and birds which support their young by them, ought naturally to have the power of reproducing itself in summer, not only by the ordinary methods of multiplication, but by a course quite out of the common line, without which it

would soon be exposed to annihilation. Hence apparently the reason for its bringing into the world its young shaped, or at least engendered, to the ninth generation. As it has not in itself the power of moving to a distance, it is carried by the winds to the neighbouring leaves, where it produces alone its whole offspring; but in autumn, when winter approaches and it could not find the means of subsistence, it is impregnated by the male and becomes viviparous; its young require the shelter of an egg during the unfavourable season that ensues.

It is a curious question whether the vine-fretter would become oviparous in autumn, if confined in a hot-house. Be this as it may, Nature evidently employs the most ingenious methods to promote the multiplication of such feeble insects. The cochineal, which in Mexico is born on the thick, succulent, and durable leaf of the cactus, finds nourishment on it during life without changing its abode: the female has a trunk of so delicate a structure that when once it is put into a leaf, she finds it impracticable to withdraw it without breaking it and causing her death. The male however has wings, and impregnates the female when in her stationary position. The latter on becoming a mother, hatches her young around her on her leaf, and as space and nourishment would soon be wanting for her numerous

progeny, Nature has provided them with the means of emigrating, as already mentioned, in the spider's web. As the cochineal, unlike the vine-fretter, can live on one kind of vegetable only, it is not deprived of food by being carried by the wind from one leaf to another. All this shows that Providence has not made the laws of Nature altogether positive and absolute, but has varied them according to the wants of the different portions of creation. Surprising as are the facts pointed out to us by the generation of insects, they are, in truth, not more extraordinary than those which may be collected from observing a variety of plants, and particularly the kinds that are most useful and familiar to us. These reproduce themselves several times in a season, as may be observed by their repeated flowering, and by the number of their suckers, shoots, and slips.

When an animal has attained his term of growth, Nature brings forth all the beauty both of his physical and moral character. It is at that age that birds display their plumage in a complete state, that they take a pleasure in singing, that the bull butts with his horns, and that the horse delights in coursing along the meadows. It is in vain for any artificial education to attempt stopping the course of Nature, or to change it by dint of alteration in diet or habit. A wolf when in an infant state caresses the master who gives

him food ; he eats and plays with his dog to whom he bears so strong a resemblance. But hardly has he lengthened his fangs, or felt the fire of love, when his thirst of blood seems awakened ; his domestic associates become odious to him, and he abandons the spot where he has a secure subsistence for liberty, and a female companion, in the depth of the forest.

It is likewise at the time of the completion of growth that the defensive arms of animals, particularly of males, attain their size, such as the spurs and crests of cocks, and the horns of bulls ; for love and war enter as much into the conjugal harmony as attachment and dislike into the fraternal. If the organs of generation are destroyed in animals before the completion of their growth, a consequent stunting of growth takes place in other parts of the body. We do not in that case see the head of the stag become adorned with antlers, nor that of the cock with a crest ; man has no beard to cover his chin ; his voice becomes broken and shrill ; while features of languor and decay are substituted for the smiling images of love. It is not, in my opinion, a well-founded notion that castration renders domestic animals fitter for the service of man ; a gentle education is all that is wanted to render them domestic and tractable. The dog, the companion of our infancy, has no need to be mutilated to attach him-

self to us ; nay, mutilation would both weaken his physical powers, and destroy, in a great degree, his moral qualities. Those who have been subjected to such an operation are perhaps less attached to their masters, and I have witnessed in a dog of my own a visible increase of affection at his season of love. He was at that time accustomed to urge me by the most tender caresses to walk in the direction of the house where his female companion was, and discovered extreme joy when my course happened to be thither. On my leaving the house, I used to observe an affecting struggle between his love for her and his attachment to me. He went from the one to the other in a state of uncertainty, and agitated by each affection in its turn. If I called him he followed me, and continued with me all the way to my door. Then, as if he had fulfilled his duty to his master, he generally returned to his companion ; but I was sure that at the middle of the night he would come to my door, repentant, and eager to make me forget his temporary wanderings by his caresses.

Reverting to the case of men, I am of opinion that married soldiers discover more attachment to their country, and even more courage, than those who are single. It is, in a great measure, to the power of conjugal affection that we are to attribute the exactness of the Roman discipline.

This was an all-powerful spring in the hands of their orators and generals; when circumstances called for great exertions, they did not show the soldiers the alternative of death and victory, but Rome and their families. The Cimbri and Teutones were perhaps more formidable from having along with them their wives and children. Conjugal harmony is one of the great sinews in the Russian and Turkish armies, many of the soldiers of which are married. There is very little desertion in military bodies thus constituted. If, in contradiction to this reasoning, examples of fidelity be found in men in the cruel situation of eunuchs, that fidelity is owing perhaps to fear, perhaps to that anxiety to discharge their duty which men feel under misfortune. It is well known, however, that the fidelity of such persons is not to be put in comparison with that of men connected with their country by the ties of family, and indeed there are not wanting many examples of perfidy among them.

If castration be productive of so much injury both in a physical and moral point of view among men and animals, a still greater danger is to be apprehended from an inordinate indulgence in pleasure. Of this we shall treat more fully afterwards; suffice it at present to remark that such cases seldom occur in the animal creation.

In many species of animals the male alone is

armed, it being evidently the intention of Nature that he should take upon himself the protection of his female associate, occupied as she is with feeding and rearing their offspring. It is however a curious fact that, while in all quadrupeds, whether carnivorous or frugivorous, the male is stronger than the female, the case should be quite otherwise in birds of prey. "All birds of prey," says Buffon, "are distinguished by a singularity for which it is difficult to account; namely, that the males are of less size and strength, by nearly a third, than the females; while in other birds, as in quadrupeds, the males have, as is well known, the superiority both in size and strength. In insects indeed, and even in fish, females appear thicker than males, but this is owing to the prodigious quantity of eggs which they contain, and which have the effect of swelling their body." This reasoning of Buffon, however, rather points out the immediate cause than the fundamental reason for the greater thickness of females. In other animals they are not so thick as males, although they carry their young, as well as in the case of fish and insects. Leaving this for the present, we shall first inquire how it happens that a male is smaller than the female in birds of prey. The power of a bird of prey consists in the quickness of his flight, and in the height to which he can rise.

Nature has therefore made the males smaller for the purpose of increased agility ; for, according to Buffon, a bird of the weight of twenty pounds could not rise in the air. The tiercel is accordingly better at flying than his female, and is consequently more esteemed by falconers. The same reason will solve the question as to fishes which fly, it may be said, through the water, and which almost all prey upon each other. In each couple the swifter of the two is, in fact, the more powerful, in the same way as, among privateers, the fastest sailer makes the most prizes. Winged insects, whose spongy bodies may be said to be in equilibrium with the air, join each other in flying, and the female carries the male ; hence a reason for giving her larger wings, and of course additional thickness.

In many species of animals the male is the more beautiful of the two. In those that fly or swim, he is the swifter of the two ; in quadrupeds, the stronger ; in beasts of prey, the better armed ; and in those animals which appear destined to live only for love and pleasure, he is frequently the more richly ornamented, and the more beautiful singer. In this, as in every thing else, we shall have little difficulty in tracing a wise purpose in the laws of Nature. The male, constitutionally active, is endowed with a superabundance of life and spirits, which carry him

towards the object of his desires ; but the female, constitutionally passive, needs to be attracted by the beauty or the accomplishments of the male in order to find him agreeable. She is indemnified for the inferiority of her stature or ornaments by the pleasure arising from the overflow of her affection. In some species, the male and female are much alike, as for example in the ring-dove. Both have the same size and plumage, and both have a black semicircle, as if they had shared with each other the ring of that conjugal love of which they are emblematical.

Observe to what a degree love enlivens animals in the spring. It calls forth their instincts in harmonies of greater variety than those of their colour, shape, and motion. Two individuals of the same species have the same colours and even shades of colour, but they have a different manner of expressing their affection. Each male is conscious of his beauty, and seeks to captivate his female ; the peacock by displaying his brilliant tail ; the nightingale by sending forth delightful sounds ; the horse by coursing around his companion. While these innoxious animals solicit a return by such gentle means, others of a harder character expect a similar reward by triumphing in conflicts. The lion bristles his mane, and calls his rivals to combat ; while the audacious eagle soars, and seeks an encounter with

another of his own species. The love of the weaker part of the creation is redoubled by the cruelty of their tyrants; they are conscious of the necessity of standing by each other. Each pair of lovers seeks an asylum under the shade provided by Nature, and thus add their conjugal harmony to that of the vegetables destined for their use. While the African lion fixes his nuptial couch in the sides of a rock full of cacti and aloes, and the eagle on barren summits which are lost in the clouds; while they redouble the horror of solitude by the scenes of slaughter attendant on their season of love, the feeble part of the creation take up their abode in the smiling valley. The timid rabbit hollows out an inaccessible burrow in the smooth down covered with thyme; and the nightingale sends forth his harmonious song from the heart of the rose-bush. The swan, when in the reeds and rushes of the slimy marshes of the north, does not dread the voracity of the white bear; and the heath-cock, who nestles on the solemn fir, is safe from the artifices of the fox. It is a curious consideration that, had we not beasts of prey, many situations, at present occupied by animals, would have been untenanted; for it is terror that drives them thither. What else points out to the eel the projection of a rock as affording a desirable retreat? It is in consequence of such wars that arid sands

and icy regions become inhabited, and that the smallest vegetable is made to afford shelter to a loving couple. The weakest animals are generally the most ingenious, our powers of mind being best exercised when it is necessary to oppose skill to strength. Above all, it is in the loves of insects that we ought to study the instincts, the foresight, and the resources inspired by that passion, and which are carried to a length surprising even to the imagination of the fabulist.

Conjugal harmony unites not only individuals of the same species, but those which are apparently the least like each other. The creeping vine requires the support of the elm to ripen its grapes, and the elm, which sheds its seeds in spring, stands in need of the fruit of the vine to decorate its foliage. In like manner, birds and quadrupeds are seen to approximate each other in consequence of their mutual wants; the wag-tail often accompanies the sheep to relieve it of insects, while the sheep, in return, affords it from its fleece materials for a nest. The titling approaches the horse to render him a similar service; the partridge and the hare have a pleasure in taking up their abode in the same solitude. The republican beaver and the solitary swan delight to associate with their mates in lakes. It is conjugal harmony which brings them together, and, taking the effects of these harmonies in a

general sense, I may say that they are the cause of approximating the oak to the oak, the plant to the plant, the animal to the animal; and of establishing between all the powers of Nature the great links of that chain which keeps them together.

But it is the human form that exhibits the most pleasant assemblage of beauty and strength. Look at a statue of Hercules, and you will find in it the characteristics of the most formidable animals; his thick muscles, his broad shoulders, his hairy breast, his tanned skin, and his imposing look, may be said to form a combination of the bull, the eagle, and the lion. A Venus, on the other hand, exhibits, in the harmonies of her curves, her colouring, and her motion, those of the mildest and most amiable animals, the lamb, the pigeon, and the gazel. The taste of the two sexes in point of dress is similar to their respective dispositions. Man, when in a state of Nature, clothes himself in the skin of the wild beast, and delights in bright and varied colouring. Even in times of comparative civilization, the dress of a French cavalier, with his helmet, his gilt spurs, and his short mantle, resembled not a little that warlike bird* whose figure is our national emblem. The military dress, so much admired by the fair

* The cock, *gallus*.

sex, was taken originally in almost every country from warlike animals. On the other hand, the dress of females, their plumes, their collars, their fans, the butterfly form of their head-dress, their gowns with flowing trains, may be traced, remotely indeed, to an imitation of the decorations of birds.

Similar as are the proportions of our species throughout the world, it admits of little doubt that an African Hercules would present a very different physiognomy and dress from a Grecian Hercules; and that a Venus born on the banks of the Neva would have very different attractions from her who sprung from the shores of Cythera. There is scarcely any article of convenience or ornament in the animal or vegetable creation, which we do not find the means of applying to our use. We go to the extremities of North America in quest of furs; to India for muslins; to the West Indies for sugar; to Arabia for coffee; to Mexico for chocolate; to the Moluccas for spiceries. We borrow from the ruins of antiquity models of sculpture and architecture. Although the immediate stimulant in these cases is the love of gain, the primary cause is often to be found in conjugal affection. We procure most of these things at a considerable sacrifice, to present to the objects that are dear to us, and who, in return, occupy themselves in preparing new en-

joyments for our gratification. Sometimes, however, it happens that this scene of mutual affection is disturbed, and that each is destined to feel the pangs of jealousy. Let us endeavour to show how such evils may be avoided by following the plain course pointed out to us by Nature.

The personal beauty of the two sexes is marked by very different characteristics. A man possesses the beauty arising from contrast by the opposition of several features of the face, as well as by the strength expressed in his organs and muscles. A female, on the other hand, combines the beauties arising from harmony in the smoothness of her shape and the elegance of her outline. The former bears the stamp of that energy which was destined to give him the empire over carnivorous animals, while the latter possesses those mild features which seem qualified to tame and domesticate the pacific part of the animal creation. They thus combine between them all the scattered beauties of Nature; but these characteristics are less prominent according to the particular stages of society. Among savage nations living frequently in a state of war, the female acquires some of the bold habits of man; while in civilized nations, long in the enjoyment of peace, it is man who leans to the adoption of the manners of the female. In either case each sex neglects its natural empire to acquire that of the

opposite sex; but the effort is vain. Whatever may be said by some moralists who have recommended the same kind of education for each, I maintain that a woman has not more influence over men by endeavouring to assimilate herself to them, nor a man over females by adopting their language and habits. To me both appear to lose a portion of their power of exciting admiration, or engaging affections, by such deviations from their natural character. A Sybarite stretched on a bed of roses seems to me much on a par, in point of attraction, with a female Spartan contending in the public square. It would appear, notwithstanding the allegations of historians, and particularly of Plutarch, that the female Lacedemonians had no great influence with their husbands; by adopting the manners and habits of warriors, they lost the power arising from delicacy and grace.

One of the first sacrifices which European females obtained from the men was the renunciation of one of the most distinct marks of their sex; I mean their beards. It has been fashionable for some writers to praise Peter the Great for having made the Russians imitate, in this respect, their more polished neighbours in the west; but I cannot agree with them either in considering the beard as an inconvenient superfluity, or in accounting Peter right in thus deviating from the law of Nature. The nobles and military com-

plied with his orders, but the peasantry and even the sailors, kept up their ancient custom, and with reason ; for in the long journies which they are frequently obliged to take in the rude winters of their climate, the beard preserves the mouth, and particularly the throat, from the intensity of the cold, more effectually than the best fur. It must be allowed at the same time, that in a grave figure the beard is becoming. The heads of our priests, philosophers, and magistrates, appear in my eyes like the heads of children, when compared to those of the Turks ; and I have no doubt that the contrast between the bearded Turk and his fair Circassian spouse has the effect of improving their appearance when together.

Although women are smaller and weaker than men, they have, notwithstanding, more power in the performance of certain actions to which they have been destined by Nature. We have already remarked that in men the shoulders are broader than the lower part of the body ; in women the case is very different, the lower part being the broader of the two. Anatomists have said that Nature has made the bones of the lower part of the body in females larger and at greater distances, to enable them to carry their child more conveniently, and to lessen the pain of childbirth. In my opinion, however, the case is otherwise ; a woman not carrying her child exactly in the

way in which this explanation implies, and the females in other species, such for example as the cow, the mare, and the ape, being no larger in the hinder part of the body than the male. My notion is that Nature having destined our females to carry their children in their arms, and to suckle them on their bosom, intended the additional dimensions of the lower part of the body as a kind of counterpoise. Whether there be any thing in this or not, we have daily experience that women are much greater adepts at carrying their children in their arms than our sex; they do it both with greater ease and for a longer time. It seems to me even that a female is not in a proper posture unless she have a child in her arms; without one she is naturally led to incline her head a little forward, as we see in the case of the *Venus de Medicis*. Man, when in his natural state, and free from any burden, holds his head erect, and even keeps it somewhat back, as appears in the statues of *Hercules* and *Apollo*.

Nature has doubled the moral and physical strength of man by means of contrasts and coincidences; she has quadrupled it by giving him the aid of woman. A man reduced to half his organs might still retain an enjoyment of most of the powers of Nature. It is true that such enjoyment would be much less complete, in as much as one eye could not take in so wide a range as

two. When male and female employ the eyes of both, they not only take in a wider range, but as each has different sensations and ideas which they mutually communicate, the enjoyment may be considered as doubled. The head of Janus, formed on one side of a male, and on the other of a female countenance, and which looks both before and behind, appears to me a very fair allegory of the combined power of the sexes, although the figure itself suggests unpleasant ideas. Nature has divided the sexes physically, but in a moral sense she has united them. So much is this the case, that in almost every language the term man (*ἄνθρωπος*, *homo*, *homme*) is used generically; I mean that it is understood to express qualities belonging to females as well as to males. In some languages, particularly in Asia, there is no separate word for woman; and I am told that the inhabitants of Siam call the fair sex by the name of young men. The word man must, of course, have a meaning somewhat different in their language from ours, in which any such appellation would appear ridiculous. It reminds me, however, *en passant*, of Rousseau's curious assertion that females are only children grown up. Buffon seems to give countenance to the whimsical epithet of the Siamese, by saying that a female in her old age acquires several of the appearances of our sex, a remark which he ex-

tends to the animal kingdom at large. He refers, in corroboration of his theory, to an old female pheasant from China, decked in fine plumage, and to be seen at the Museum of Natural History in Paris; but I have no doubt that, after all his arguments, the animal in question is an old cock.

Wherever we extend our inquiries, we find a radical distinction between the male and female character; a distinction kept up during the whole of life, yet compatible with perfect harmony between the sexes. It is on account of the mutual agreement and innate instinct, which often seizes two lovers from their first interview, that Plato imagines the human soul to consist at the outset of two halves descended from heaven, exiled into different bodies, and aiming incessantly to unite themselves on earth. Curious as this notion is, it may be received favourably by some political arithmeticians, who find, on comparing statistical returns, a general correspondence in the births of both sexes. In looking back to a remote stage of society, we find the two sexes standing as much in need of each other's co-operation as in the present day. If a man climbs a tree to beat down fruit, his wife remains at the bottom to gather it; the one finds victuals, the other cooks them; the one pursues wild beasts in the chase, the other rears domestic animals; the

one builds a hut, the other makes clothes ; the one manages matters out of doors, the other within ; in return, they double their pleasures, and diminish their trouble by such a participation,—a participation, however, in which both continue to retain their distinctive characters, the female giving vent, on a joyous occasion, to all the enthusiasm of sensibility, and the male discovering all the coolness of reflection. If vexations occur, the male meets them with firmness and with reason ; the female escapes from their effect by the lightness of her thoughts : the one, conscious of his strength, cherishes ambitious views ; the other places her happiness in fixing the affections of her partner. If age weakens the early warmth of their attachment to each other, it becomes, in a manner, renewed by the interest they take, not only in their children, but in their grand children ; one treating them with paternal foresight, the other with a mother's care and affection. It is thus that a virtuous pair proceed in that course which approximates them to the Divinity. Like the spark which disappears as soon as it is kindled, because it finds no fuel to take hold of, man and woman without each other would be of short duration, in as much as their interest in life could not be continued by posterity. Such a situation would display the igno-

rance, the weakness, the wants of their condition; but conjugal harmony communicates knowledge, power, and enjoyment to our species.

It is certain that chaste and temperate habits are the chief foundations of strength and beauty in the two sexes. It is the youth of purity, who becomes a prudent and a healthy man. Such manners have, in my opinion, a greater effect in improving our appearance than the air of mountains; for I have seen as good looking a population in the marshes of Holland as can be found in the mountains of Switzerland. The wives of the fishermen of Schevelingen near the Hague form no bad resemblances of the so much admired figures of the Sabine women. In Holland we find children with as fresh a colour, as pure a white, and as bright a red, as in any country. It was there and in the neighbouring Flanders, that Rubens took the ideas of his goddesses, and that Francis Flamand modelled his Cupids. Were the air of the mountains of Switzerland the cause of the comeliness of the men and women in that country, how does it happen that the two sexes are so diminutive in the adjacent mountains of Savoy? The unhealthy and premature labour to which young people are subjected in that country may serve to explain it; as far at least as depends on a physical cause; but there is probably a moral reason in the bad habits introduced into

the country by those Savoyards who seek a living in our towns, and who are accustomed there to scenes of irregularity and vice. They come among us innocent, and if they do not participate in the vicious scenes which they witness, their minds must at least be debased by a recollection of the improprieties prevailing among us.

It is only by exercising the body that you succeed in affording a pleasant variety to the mind. A young girl has need occasionally of such a change, for Nature has not made her to remain perpetually on her chair. Mingle moderate exercise with the studies of youth ; a garden will offer them such in proportion to their strength and their taste ; for a garden requires to be cultivated, watered, irrigated, weeded, and fenced. Nor is such exercise wholly lost with a view to mental culture. A garden brings to their eyes traces of that Providence which has foreseen every thing and arranged every thing with infinite magnificence, and which calls man, as well as animals, not only to the enjoyment of his works, but to a confidence in his plans. Make the youth feel that, while Providence has afforded a variety of means of diversifying life by innocent pleasures, it punishes the abuse of pleasure in a number of ways ; and that the all-seeing eye perceives not only our most secret acts, but even our most reserved thoughts.

Jealousy sometimes mixes her dark draught even in the cup of innocence and of infancy. This passion is made up of ambition and love, and is sometimes productive of the most shameful scenes among our species. As we have made it, however, a rule to exclude ambition from the education of children, jealousy will make but little ravage in either sex, among such as are brought up on our plan ; it will stimulate neither the quarrelsome disposition of boys, nor the vanity of girls. If one of your boys is fond of a girl, who treats him with indifference, excite his ambition in opposition to his love, and show him how degrading it is to sigh after one who makes no return ; or who, perhaps, prefers another to him. A new attachment will soon be formed at that tender and volatile age. It is easy to detach a young plant from the bottom of the tree to which it clings, and a very difficult matter to do it after it has grown up.

Teach youth from their earliest years to submit their passions to reason, and show them that, if not controlled, these passions will control them. How many events in life ought they to be prepared for, as likely to interfere with their favourite inclinations. Fortune, caprice, sickness, death, may all occur to dissolve the most sacred bonds. It is not so with a mutual attachment founded on virtue. As it takes in the prospect of another

world, it may be said to survive the tomb ; and in religious minds the objects of affection frequently inspire a stronger predilection after death than during life. Let your most important lessons, therefore, be directed to the duties of the conjugal state. Teach your female pupils that their affection must be undivided and confined to a single man ; constant, because they must love him for life ; complaisant in order to soften his temper, and gay to dissipate any gloomy thoughts which circumstances may excite in him. Teach boys, on the other hand, to be moderate in their attachments, and firm under the trials of life, that they may sustain and protect their tender companions.

Labour, which some complain of as a hardship, is, in my opinion, a gift of heaven ; it forms the true bond of conjugal harmony ; it banishes languor, enlivens the mind, and settles the imagination. By directing our faculties to a useful object, it enables us to make discoveries which may be termed rays of celestial intelligence ; it provides for our pleasures and our wants by presenting us with new enjoyments ; it prevents the passions from going astray when it is combined with the desire to please a beloved object ; it fills the soul with delightful sensations. In such a situation love lends his wings to genius, and enables it to perform prodigies. All persons,

I am persuaded, who have excelled in any art, have had susceptible hearts. Indeed there are few masterly performances in any department, in which love is not either the subject or the object.

The desire of making a provision for the object of our affections, and of settling ourselves with her for life, is the main spring of our exertions in various professions. It is with this view that our mariners traverse the ocean in quest of fortune; that many of our young men embrace the profession of arms, and that a number of our writers take up the pen. Cupid is the Mars of warriors, the Apollo of poets. Observe with what spirit verses flow from hearts that are full of the subjects of which they treat. Can we attribute to any thing but a susceptible heart the animation of the divine Homer, the sage Virgil, the ingenious Ovid, the philosophic Horace; or the vivid colouring of Racine, Corneille, Crebillon, and La Fontaine. They invoke the Muses, but their real inspiration comes from a still more tender quarter.

A similar observation is applicable to our greatest philosophers, to Plato, Montaigne, Rousseau, and our divine Fenelon. What renders the virtue of the latter so affecting is the perpetual struggle against the soft passions to which his situation of ecclesiastic in the Catholic church must have given rise; but it was evidently these

passions that dictated his *Télémaque*. It is to preserve his hero from the errors of youth and love, that he puts him into situations requiring so much exertion; and although his apparent object be to make him go in quest of his father, he makes him actually find out the daughter of Idomeneus, and gives her to him in marriage, as a recompence for his filial love and other virtues.

If ambition be the cause of the misfortunes of mankind, how can we have been so blind 'as to admit its influence among children in our schools? and why should we at present banish from these schools the influence of love, which is so similar to ambition, inasmuch as it is the motive of all that is good and creditable in our conduct?

Offer your pupils then a mutual encouragement in the friendship of each other. Youths have soul enough to love, for they are arrived at the age of feeling. We have kept at a distance from them all that could taint the early passions; let us permit the spring of life to send its waters along their natural slope. If you oppose a barrier to it, it will either be lost by flowing back on itself, or it will become a torrent, and ravage the land which it is intended to fertilize.

Precepts without number have been compiled in regard to marriage. Plutarch has composed an indifferent treatise on this subject, and enumerates no less than forty-five of them. His

task was a difficult one, for he wanted to bring together persons who had been separated in their education. My task would be still more difficult, were it directed to the same object; but laws are numerous only where customs are bad. Matrimonial precepts would be endless, were we to compose one for every duty of the married state. The books that I have seen are without plan or method, confounding the characters of the two sexes, and never admitting that the virtues of the one may frequently be faults in the other. An infinity of dramas and romances have been written on love; but they all end where they should begin; I mean with marriage. The indifference, or even the raillery, permitted in regard to this great bond of society, arises from the want of a due reprobation, in France, of conjugal infidelity.

It is with a view to obviate this great mischief, too long sanctioned by example, that we have expressed a desire that women, like men, should put their trust in God alone; and that we have argued for a confidence in that Providence which displays itself in all parts of nature, in order that they may find a secure refuge in the tempests of life; and that they may cling to it as to the rock of their salvation. Certain it is that, in seasons of grief, the two sexes endeavour to console each other, and find a much better sup-

port in the contrast than they could in the similarity of their characters. The spirit of ambition given to the one, and the inclination towards love in the other, have, no doubt, been implanted in us by Providence that we may draw near without running counter to each other; as but too frequently happens in societies composed entirely of men or entirely of women. Hence the impropriety of considering a keen tempered man and a mild woman as an ill matched couple. They often live together with a degree of harmony which affords a strong proof that contrast is not unfavourable to love. Enmities are perhaps most lasting among persons tainted by the same vices; misers, debauchees, and men of unprincipled ambition, all detest their rivals in vice; while they have naturally an esteem for those who are possessed of qualities and virtues to which they are strangers. The intolerant has a secret admiration of mildness and patience; the intemperate of sobriety; the miser of prodigality. We may, consequently, take for granted, that masculine and feminine qualities agree very well together, notwithstanding their discrepancies; every thing has been arranged by Nature with a view to establish confidence between the husband and wife. As example is much more efficacious than precept, I should be desirous to present to children various pictures of

conjugal happiness. They are, in general, fond of reading romances and of seeing plays acted; and I should accordingly begin with these. I have often regretted that we had not a romance on the plan of Robinson Crusoe, in which a married pair in a desert island should contribute to render life comfortable to each other; the one occupied with every task that requires the exertion of strength; the other with those of a more delicate and agreeable nature. I long ago knew some very fortunate marriages, of which I had been a witness, in the poor and remote part of Finland. Such, among others, was that of a Colonel, who had retired to his property in that rocky country, and at whose house I was hospitably entertained.

He was a Swede by birth, and had been, like me, an officer in the engineer department in the Russian service. Being a stranger and without property, he had been sent to Siberia, to construct, agreeably to a plan drawn up at court, a prison for the well-known Marshal Munich, who had been condemned to end his days there. After executing this unpleasant commission, he had been sent as engineer to Fredericksham in Finland, a quarter almost as barren and as thinly peopled as Siberia. During his solitary residence there, he happened to learn that there was, at the distance of a few leagues, a Vice-Admiral, a

Swede like himself, who lived in exile on his estate. He went to see him and was very kindly received. This general officer had property, and an only daughter, whom he thought he could not better dispose of than by giving her in marriage to a young man of his own nation, who had acted a consoling part to him. The engineer made a prudent use of his good fortune; retired from the exercise of his profession, and even from the service; built a plain house in the middle of a garden, where, even in summer, I saw nothing but firs and sycamores; but his house was the picture of conjugal comfort. His wife, though no longer young, had a very interesting look, and, among other things, showed us with much good humour the presents made her annually by her husband at Easter, according to the Russian practice. These were nothing more than eggs painted in a variety of colours; and the whole were displayed in a glass cupboard.

All this family received us with the utmost cordiality, and friends were collected from a distance of ten or twelve leagues to keep us company. The time passed in this house was a succession of amusements, balls, and entertainments; in fact, we began to think that the house had been built in its solitary situation with a view to such convivial meetings. The saloon was situated in the middle, and surrounded by a corridor and

four rooms, the wooden partitions of which were removed without difficulty, so as to double the size of the saloon, while they left four little apartments, each fit for playing cards, taking coffee, or for retiring to rest. The master of the house was rather corpulent, of cheerful manners, and always occupied in making his wife, his daughters, and their friends comfortable. How different from this was the situation of poor Marshal Munich in the midst of his guard. I saw a model of his prison in the room of our hospitable philosopher; it consisted of only three rooms, the one appropriated to the soldiers of the guard, the second to cooking victuals, and the third as the Marshal's bed-room. There was at some distance a wooden railing, which, though only twenty feet high, prevented him from enjoying a prospect or receiving the rays of the sun. He was sent thither at the age of sixty, and, after having governed the whole Russian empire, was limited to an expense of half a crown a day. He continued in this cheerless abode till the age of eighty. Yet conjugal love stripped his prison of all its horrors. His wife, then of the age of fifty-five, had the courage to accompany him, and to discharge all the duties of a faithful companion. This great man conciliated the affection of the rude soldiers by teaching their children mathematics. They passed no less than twenty-

one years in this retreat, and in affording each other consolation. On their return to Moscow, they found no less than fifty-two of their great grandchildren who came forth to meet them. Scarcely had the Marshal returned, when the revolution, which overset the emperor, (Catherine's husband,) and ended in his death, had very nearly been the cause of his being sent back to his imprisonment. I arrived in Russia immediately after that catastrophe; and it was the old Marshal, at that time Governor of Petersburg, who got me taken into the service without any other recommendation than that which arose from my misfortunes.

I have quoted these examples of conjugal fidelity because gratitude renders them interesting to me; but we should find still more affecting instances in the history of the French Revolution, in which women voluntarily accompanied their husbands not only into solitude, exile, and imprisonment, but to the scaffold. It is sufficient to notice here the devoted attachment of the wife of Camille Desmoulins. When her husband was sentenced to death, she rushed among his inhuman persecutors, and, in order that she might die along with him, called out aloud, *Vive le Roi*, which was the signal for her condemnation and death.

There is, in my opinion, more difficulty in surmounting mortifications in society than physical hardships. In writing a romance, I should en-

deavour to describe, not an affectionate pair contending among the snows of the north against want and the attacks of wild beasts, but a husband and wife, who, while those around them were in plenty, should encounter a state of deprivation, and yet have the courage to resist calumny, seduction, and superstition; who should rear their family by dint of industry, and prescribe to themselves, as a sacred rule, never to deviate from the path of virtue. Examples of this nature are not so scarce as we may imagine; we might find them sometimes at our doors, would we go in quest of them as we go in quest of objects of a more selfish description. I remember seeing many years ago a poor blind man at the gate of Montlheri, who had lost his eyesight in efforts to save a house in the town from fire. His wife, in years like himself, led him backwards and forwards to the city gate, where he asked alms of the passengers. This old man seemed to me as much entitled to complain of the ingratitude of his fellow citizens as Belisarius of that of his emperor, and I found him as much an object of respect when along with his old companion, who brought him his victuals, as the Grecian general when attended by his beautiful little boy.

It is customary to teach our children mathematics, chemistry, geography, botany, and his-

tory; and why should we not endeavour to give them practical lessons on virtue? Instead of sending them to travel in Greece or Egypt, to bring back strange habits, or fragments of antiquity, why should they not be made to travel in their own country to acquire a knowledge of its manners. The discovery of some Socrates living in content with an ill-tempered woman would be a more interesting matter than the discovery of a statue of Socrates at Athens. We pay professors of botany and zoology, as well as scientific men engaged in search of new plants, animals, or vegetables, but where are there professors paid for the purpose of teaching us to study the laws of morality, and to make us in love with virtue? Is not then a virtuous man and a good husband an object of greater value than a cactus or a rhinoceros? I am well aware that we act liberally towards a man of letters when he is a foreigner, or when among ourselves he belongs to a party in favour. Science, no doubt, is entitled to this distinction, but has not virtue then any value when found among the natives of our own country? Shall we be like those corrupt Athenians who spoke incessantly of virtue, who persecuted their great men during their lives, and paid honours to their memory after death? I would not recommend saying to children, Look at the family in that splendid mansion, and mark

how rich they have become by their own exertions; I should rather say to them, "Observe the occupants of this cabin; see how happy they are in their poverty; this is the consequence of their union." Let us not imagine that children are indifferent to such a sight because the prospect is distant in their eyes. Do they not see, in like manner, only at a distance, that patriotism which is so studiously inculcated on them? Do they not imitate in their sports the gravest actions of society? Do they not take a pleasure in playing the parts of magistrates, judges, and robbers? They imitate these situations from their earliest years, and their sensibility, as is well known, discovers itself very soon; for I have seen children at the age of eight burst into tears at a pathetic scene. If their own neighbourhood offers no suitable example, I would look for one in ancient history, and I would endeavour to furnish their memory for the sake of guiding and inspiring their heart.

It is a proverbial saying, that a good wife makes a good husband. There is a great deal of truth in this, for women have the talent of bearing with a bad temper in a higher degree than our sex. Their weakness inclines them from early years to something like dissimulation; at least they can conceal their sentiments much easier than men; a pliancy of character which I

do not dwell on as a fault, but consider as necessary in their situation. It is by means of this pliancy that they continue a link between families, and that a virtuous woman may live, as is often the case, in tranquillity with a vicious man. Hence the talent of a female in making minds of the most opposite kind follow in her train, and aid her in the accomplishment of her views.—Armida meets, in the camp of Godfrey, warriors who dispute with each other, and she does more than that general was able to accomplish, when she makes them all concur in support of her projects. When Rousseau told me that Armida pleased him more than Virgil's Dido, he meant to allude not so much to her amiable qualities as to her powers of persuasion. Homer has given the same quality to the virtuous Penelope, when he exhibits her as contriving to live in peace with all her suitors, without deviating from the paths of virtue. We do well accordingly in teaching young girls to render themselves generally agreeable, but to confine their attachments to one object. With this view they ought to follow the example of Nature, and to learn from her that the plainest attire is most favourable to the display of beauty. Fenelon, in his "Education of Young Women," is very right in desiring that they should adopt the form of the Greek robe, which sets off the person to such advantage, and

displays all its natural beauty. They should be taught to despise the glare of diamonds as producing a harsh effect even in paintings. Flowers harmonize much better with their countenance than diamonds and pearls. "As you could not make her handsome, you have made her pompous," said an old painter to one who had exhibited Helen in a magnificent robe. Impress your daughter with a distrust of wealth, attended as it is with so much corruption; confine her taste to natural ornaments; and, on looking at the diamonds in which vice decks herself, let her say like the female Spartan, "My children shall be my jewels." Impress her, above all, with a predilection for domestic labours and for a retired life. It is not a life of splendour that merits our esteem, but one that is plain, uniform, and constant, such as, agreeably to the memorable saying of Marcus Aurelius, is known to the Gods alone. It has often occurred to me that it would be almost as difficult to prevent people from speaking of one at all, as to fill the earth with one's reputation; the life of Diogenes seems to me, in several respects, preferable to that of Alexander. In the case of a female it is clear that her highest praise consists in being little known; for if it be the duty of a husband to labour for the good of society, it is that of the wife to confine herself strictly to her family.

Nothing but a complete confidence in the Deity is sufficient to render men faithful in the discharge of their duties. As religion has sooner or later a powerful influence on women, and as the religion of a woman influences, in turn, her outward deportment, I have been anxious to explain how far the agents of nature are the agents of the Deity. It seems to me less dangerous for children to be inspired with a feeling of adoration towards the sun, than to have impressions of that nature at the sight of an image, the work of human hands. Not that I am inclined to treat with severity any creed, however erroneous; I am disposed to consider them as so many tongues calling on the Deity in different dialects. The discovery of errors in a system of religion should not lead us to make light of that which involves the happiness of nations: we ought rather to be cautious in our attempts to make converts, and to consider the established doctrine as a common centre of union. The catholic creed, for example, proposes for every day of the year the imitation of the life of a saint, and it gives children the names of saints, under the conviction that example is of greater influence than precept, and that youths will be at pains to model their conduct, to a considerable degree, on that of those who have borne the name before them. How often have such names and such examples in-

duced young persons to withdraw into solitude, and to consecrate their days to a series of beneficent actions, under persuasion that they would thus lead a life more agreeable to God, and more respected by men. I myself, when in infancy I was harshly treated by my masters, took, in consequence of having my imagination filled by such narratives, the determination of leading a solitary life in the fields, and of putting my confidence in God alone, persuaded that God would not fail to support me, like Paul the Hermit, in the desert. I set off accordingly with no other preparation than my breakfast, and I passed the day in listening to the singing of birds, in enjoying my liberty like them, and in eating raw turnips and bramble-berries. I was preparing to pass the night at the foot of a tree, trusting for my support to Providence, when, instead of any supernatural gift, it sent me a servant of the family to conduct me home. A confidence in the goodness of God has been my consolation in a variety of disagreeable situations: in these I was not indeed fed by means of birds, but I was supported by means fully as extraordinary. There is no doubt, therefore that, if we lay before children the lives of men who have been useful to society, they will be stimulated by a desire to imitate them.

It is the part of government to increase the degree of influence already possessed by the dis-

charge of our duties in society. Aristotle divided moral philosophy into ethics, which treat of the *summum bonum*; into politics, which discuss the government of states; and into economics, which lay down rules for the government of families. He made politics precede economics, because he imagined, says Plutarch, that a family cannot be well regulated unless a republic be so in the first instance. We, on the other hand, follow a course which we imagine more agreeable to that of Nature, for the plain reason that families must have existed before republics. In other respects, we are of the opinion of Aristotle, and are disposed to labour for the same objects; for if a well regulated republic makes the families who compose it similar to itself, well regulated families will have a correspondent effect on a republic. These, however, are considerations for a government. As to me, a humble individual, taking only a very limited view of surrounding objects, I account myself happy if my efforts can be conducive to the welfare of a single family. At the same time, I cannot help thinking that a school, founded on the attachments already pointed out, would present on a small scale something like the image of a commonwealth; we have long admired the strength of the Theban battalion, whose soldiers all fell with their faces towards the enemy; this courage was founded on

mutual affection. A school formed on such a principle could not fail to give children fortitude in resisting disappointment, so that friendship might be rendered one of the most potent bulwarks of the state.

We have already seen the pleasant effects produced in society by what I have termed fraternal harmony. Conjugal harmony is the source of still more affecting consequences ; the former offering only coincidences, while the latter adds the attraction of contrast. We see with pleasure in a landscape a rivulet united to another rivulet, a valley to a valley, and two trees or animals of similar species grouped together. If you see two friends in a solitude, you find the interest of the situation greatly increased by their presence, but that interest will be farther augmented, if conjugal contrasts be substituted for what I have termed fraternal coincidences. Picture to yourself, in the mountains of the Isle of France, at the rising of the sun, when the shade of night is harmonizing with the rays of morn, a river which, in like manner, is in harmony with the mountain at whose base it runs :—add to this, the reflections of the water which repeat the shape of the rocks, and the echoes of the rocks which repeat the murmurs of the water climbers grouped with palm-trees ; a pair of turtle doves building their nests ; with a Paul and Virginia

inhabiting the same cottage, and addressing their prayers to Heaven ;—figure all this to yourself, and say whether the last addition does not contribute greatly to the interest of the landscape.

While conjugal harmony spreads such charms throughout the works of Nature, it diffuses equal delights in society. Fraternal harmony has produced the useful arts, but conjugal harmony is the source of those which exhibit a combination of utility and gratification. Painting and sculpture may have owed their first sketches to an anxiety to preserve the recollection of an absent lover. These rival arts studied their proportions in the human frame, and derived from it their first ideas of symmetry. Among those rude tribes, where females had lost their influence, and where all trembled under the despotism of priests and kings, these sister arts represented rude and gigantic figures ;—masses whose legs and arms were stiff as mummies. But in the mild regions of Greece, they displayed man and woman with all the beauty of proportion ; the spectators imagined that they saw *Venus* breathe, and *Apollo* tread the ground.

Architecture has by no means made a correspondent progress ; and the cause, when we come to scrutinize it, is found to lie in its employing only fraternal harmonies, such as symmetry, coupling of pillars, and other coincidences of the

same description. Pillars coupled together have no doubt a finer effect than if they were separate ; they make one body out of two that are similar to each other. I cannot help thinking that we might make use in our peristyles of columns of different sizes ; the loftier would represent male palm-trees mixed with flowers, and those of less elevation would resemble female palm-trees, with dates hanging from their capitals. A conjugal harmony of this kind would, in my opinion, be very ornamental in architecture ; it would remove that monotony which is its most ordinary defect. The higher pillars being placed in the fronts of monuments, and the smaller behind, an extension would be given to the prospect both in height and depth. Why should we not distribute pillars of different diameters on the same horizontal level, rather than those of different orders on the same vertical plane, as is seen in the Louvre, the court of which appears to me disfigured by it. It is, in my opinion, a great abuse of the art, although authorized by celebrated architects, and sanctioned by the example of most of our monuments : these different stages of columns are unnatural, and would be much better side by side. On looking at a forest, we never see trees of different kinds grafted on each other ; they are mixed and placed on different levels, which has a

very pleasant effect. Some architects apply these laws in a blind manner without understanding their principles; they do not hesitate to put round in opposition to square bodies, or an abrupt cavity in opposition to a pyramid. I admit, however, that this has sometimes a pretty effect, particularly in buildings of similar character, as is exemplified at Paris, where we take a pleasure in looking from the Louvre at the dome *des quatre Nations*, on the opposite side of the water.

Various architectural beauties may be suggested by studying other harmonies of Nature. The Chinese appear to have paid particular attention to this, as may be seen by looking to the letters of brother Attiret, a painter, who has given us a very interesting account of the construction of their palaces. Military architecture derives from the Harmonies of Nature ideas which suggest very important improvements in fortification. In former days, the towers built at the gates of cities, and from distance to distance around their walls, afforded a considerable degree of protection; but the defence was not complete until instead of those towers they substituted bastions which flanked each other in all their circumference:—the bastion thus protected the curtain, and received a similar protection in return. Towns were thus rendered apparently impreg-

nable; but the means of attack became in time superior to those of defence when the same laws were applied on a greater scale.

There is hardly any art that is not indebted in part, for its strength or its beauty, to what I have called conjugal harmony. This observation is particularly exemplified in language, that art of arts, which serves as a bond of union to every thing, and is the means of enabling man to hold an intercourse with his fellows. We have already mentioned that every language commenced with music and poetry. Men began by imitating the cries of the animals and the songs of the birds belonging to their climate; proofs of this may still be found in the language of savages. The Hottentot language has a clucking sound, like an ostrich; that of the Patagonians resembles the noise of the sea breaking against their shores; and traces of the same kind may be found, though faintly, in the language of the different civilized nations in Europe. Some persons attribute the hissing sound that so frequently occurs in English, to the impression excited on the early inhabitants of the coast by the cries of sea-birds; while the guttural sounds in Dutch are traced back, by these ingenious etymologists, to an imitation of the noise of the frogs in their marshes. Be this as it may, we find that in all languages the names of animals have been imitated from their cries;

such as wolf in English, and $\beta\epsilon\varsigma$, $\beta\omicron\omicron\varsigma$, (an ox,) in Greek. I observed in my little girl, when only twenty months old, much more attention to animals than to plants. She took a pleasure in pointing them out and in imitating their different sounds; and although she could hardly pronounce a word, she contrived to catch the different tones of speech, raising and lowering the voice as in conversation. Her language was properly a sing-song; I mean that it consisted of sounds without articulation. In birds, the male has a fuller, a stronger, a longer, and a more varied sound than the female, who, in fact, seems to have little else than passive notes. She employs sounds something like the *e* mute in French, and it is a curious fact that women are more dexterous than us in imitating the songs of male and female birds. Language was originally formed of what are called, in French grammar, masculine and feminine sounds; that is, a full sound to designate the male, to which our forefathers added a soft sound, like an *e* mute, to mark the female. It is thus that in French we say *rossignol* and *rossignole*; *loup* and *louve*; the sounds having first been expressed by singing the vowels. Vowels abound in the language of people in a rude state of civilization; they are often put after one another in such languages, while consonants are comparatively rare. This

may be remarked in the vocabulary of the nations of the South Sea, whose language in that respect is not unlike that of children among us. When languages have begun to take a fixed character, and to give a definitive sound to words, consonants are multiplied, as is the case in our European languages, which are so many dialects of primitive tongues. The Russian, for example, is derived from the same source as the Greek, and reckons no less than forty-two letters in its alphabet. Several of these, however, are our consonants, with a shade of difference in the mode of pronunciation. The great distinction between primitive languages and the dialects derived from them consists in this, that the words of the former abound with vowels, and those of the latter with consonants; the former being a kind of sing-song, while the latter come properly under the denomination of speech, and receive a distinct articulation by means of consonants.

Uncivilized tribes, being in a state of freedom, are in the habit of expressing their passions without reserve, while civilized nations have little scruple in dissembling theirs. The origin of rhyme is a curious question; it is evidently antecedent to prose, and may have been suggested to man by the singing of birds. Be this as it may, certain it is that music and poetry were the first forms in which eloquence attempted to show itself.

The ancients made, as is well known, no use of rhyme, and had recourse to a variety of verses of different degrees of length, which they employed in elegiac, heroic, and other kinds of poetry: the number of distinct stanzas, in Greek and Latin, is computed at fifteen. Love and war equally formed the subjects of these poems. Tyrtæus, Pindar, and Horace, deserve the attention, not merely of the admirers of poetry, but of artists; and, in particular, of a scientific student of architecture. This may seem an odd recommendation; but I have heard M. Blondel, the celebrated Professor of architecture, say that a famous architect conceived the plan of an ornamented cornice while playing on his violin; and, I confess, it seems possible enough that a beautiful stanza might suggest ideas for a peristyle. Having touched on this subject, I cannot deny myself the pleasure of bringing before my reader the eleventh ode of the third book of Horace, for the sake of showing the pleasant effect produced by the conjugal harmony of the verses, varied as they are. Each stanza consists of three verses of eleven syllables each, (the invention of which is ascribed to the unfortunate Sappho,) and of an Adonic, or verse of five syllables. Horace entreats Mercury to render Lyde favourable to him, and extols him for having suspended by the charms of his verses

the torments of the infernal regions, particularly those of the Danaïds :

— Stetit urna paulum
 Sicca dum grato Danaï puellas
 Carminē mīlces.
 Audiat Lyde scelus atque notas
 Virginum pœnas, et inane lymphæ
 Dolium fundo pereuntis imo,
 Seraque fata.
 Quæ manent culpas etiam sub Orco :
 Impiæ, (nam quid potuere majus ?)
 Impiæ sponsos potuêre duro
 Perdere ferro !
 Una de multis, face nuptiali
 Digna, perjurem fuit in parentem
 Splendide mendax, et in omne virgo
 Nobilis ævum :
 Surge, quæ dixit juveni marito ;
 Surge ; ne longus tibi somnus, unde
 Non times, detur : socerum et scelestas
 Falle sorores ;
 Quæ, velut nactæ vitulos lænæ,
 Singulos, eheu ! lacerant : ego illis
 Mollior ; nec te feriam, neque intra
 Claustra tenebo.
 Me pater sævis oneret catenis,
 Quod viro clemens misero peperci ;
 Me vel extremos Numidarum in agros
 Classe releget.
 I, pedes quo te rapiunt et auræ,
 Dum favet nox et Venus ; I, secundo
 Omine, et nostri memorem sepulchro
 Sculpe querelam.

Translated by Francis.

Dry stood their urn, while with soft strain
You sooth'd the labours of the virgin train.

Let Lyde hear, what pains decreed,
Though late, in death attend the direful deed.

There doom'd to fill, unceasing task !
With idle toil, an ever-streaming cask ;
Impious, who in the hour of rest,
Could plunge their daggers in a husband's breast.

Yet worthy of the nuptial flame,
To latest times preserved a deathless name,
Of many, one untainted maid,
Gloriously false, her perjured sire betray'd.

Thus to her youthful lord she cries,
Awake, lest sleep eternal close thine eyes ;
Eternal sleep: and ah! from whom
You little dread the fell, relentless doom.

Oh! fly, my lord, this wrathful sire;
Far from my sisters fly, those sisters dire.

Who riot in their husbands' blood,
As lionesses rend their panting food ;
While I, to such fell deeds a foe,
Nor bind thee here, nor strike the fatal blow.

Me let my father load with chains,
Or banish to Numidia's farthest plains ;
My crime, that I, a loyal wife,
In love's compassion spared my husband's life.

While Venus, and the shades of night
Protect thee, speed, by sea or land, thy flight ;
May every happy omen wait
To guide thee through this gloomy hour of Fate,
Yet not forgetful of my doom,
Engrave thy grateful sorrows on my tomb.

These verses would be evidently less affecting if they were Alexandrines, or if they were of the same measure throughout. The Adonic in each stanza is expressive of love and grief; the dactylus and spondæus form a very melting termination, and may be said to contain an expression of the meaning of the whole stanza. *Carmines mulces. Seraque fata. Perdere ferro! Nobilis ævum: Falle sorores: Claustra tenebo. Classe releget: Sculpe querelam.* These different terminations convey in a manner the substance of the whole Ode.

The *Carmen Seculare* of Horace contains still greater beauties of the same description, and seems to have been composed with the view of showing how far they can be carried. The nature of the verse is the same as that of the ode just quoted, and the stanzas are contrasted with each other one by one, or two by two; having been composed to be sung alternately by youths and girls. The former begin by invoking the sun, the latter the moon: the former are excited to patriotic ambition, and pray that the god of day may see nothing throughout his glorious course greater than the city of Rome; the latter, more alive to tender feelings, entreat the fair ruler of the night to preside over the deliveries of their mothers, and over their own settlement in domestic life. The youths pray for the farther

extension of the Roman empire; the girls for the abundance and comfort of its inhabitants. As the poem proceeds, the male singers celebrate the terror of the Roman armies spread abroad among the Medes, the Scythians, and Indians; while the girls delight to expatiate on pacific topics, such as the simplicity of ancient times, the approaching close of the day, and the prospect of future plenty.

The young girls sung these stanzas alternately, one by one, or two by two; the music being, doubtless, in correspondence with this arrangement. Horace seems thus to have united in this poem, short as it is, the most interesting subjects of conjugal harmony, valour in war, and love, which have been the objects of admiration and of poetic effusion among every people. On analyzing other poems, we shall almost always find that these subjects constitute, directly or indirectly, their leading themes. Pastorals often treat of the quarrels of shepherds; elegiac poetry frequently laments a beloved mistress; comedy amuses us with love scenes in ordinary life; while tragedy affects us by the distresses of heroic or dignified lovers. Even in epic poetry, which apparently combines all the harmonies of Nature, the grand and decisive attraction will be found in passages coming under the description of conjugal harmony. The object of the Greeks in the *Iliad*

was the recovery of the lost spouse of Menelaus; the object of Ulysses in the *Odyssey* was to return to his faithful and disconsolate partner. The most affecting passage in the *Iliad* owes its interest to the conjugal attachment of Hector and Andromache; and our partiality for Hector, who is unquestionably the most engaging character in the poem, arises, in a great measure, from contemplating him in the situation of a husband and a father. Had Virgil given the finishing hand to the *Æneid*, he would have exhibited a much more striking picture of the object and conclusion of his poem, namely, the marriage of Æneas and Lavinia. His beautiful description of the love of Dido shows how greatly he was qualified to excel in that department. A similar inference will be drawn by the reader of the *Georgics*, particularly from the affecting narrative of Orpheus and Eurydice. Fenelon, as I have already remarked, gives much interest to his poem by making the succession of incidents described in it terminate in giving Telemachus the daughter of Idomeneus in marriage, in recompense of his filial attachment. The want of such a chain of connexion is strongly experienced in the *Henriade*; and that poem is, consequently, deficient in a moral object of the highest interest to mankind.

Offer early to both sexes pure and innocent objects on which they may fix their attachment.

Let them accustom themselves to oppose the influence of these mild habits to the impulse of selfish passions, and you may take for granted that you have established a considerable barrier against corruption. A desire to please, elegance of manners, and a habit of constancy in attachment, may all be looked for from early affections cherished in this way. As every art and every science borrows much of its beauty from conjugal harmonies, moral science will be found to derive attraction from the mere prospect of it, however remote. He who loves a virtuous object and is beloved in turn, may be said to carry happiness in his heart; he is pleased with others because pleased with himself. A sentiment stronger than friendship animates him in his labours, and makes him cheerfully brave the tempests of life; like the seaman, contending with a storm when he has in prospect the port of his destination.

It is by means of the first fires of conjugal love that you will succeed in kindling in a young man the fire of patriotism. To call on him to indulge such a thought as that of taking delight in the death of his fellow creatures, would be to humiliate him, and to bring him to a level with the brute creation. A bull becomes enraged at the sight of glaring red, and a sportsman's dogs are animated by the sound of the horn. I have seen a lion roused to rage by the mere noise of a

drum: after beating on it for a few minutes, the voice of the king of animals was heard, and his roaring was kept up at intervals, until, seeing no antagonist, he was soothed, and his voice calmed. Thus, when the winds have raised the waves, we see the billows continue in motion after the storm, and dash for some time in a calm on the sea-shore. Would you educate your pupil in such a way as to expose him to be gained over by the art of a turbulent or insidious orator? Would you render him, like a surly dog, ready to attack every passenger, and even his own master whenever he is provoked?

A man should never blindly leave his powers at the disposal of another man; his patriotism, should be excited only by virtuous feelings. And what kind of virtuous feelings do you aim at cherishing in a youth? Shall it be affection for his parents, who perhaps treat him harshly; or for a government whose laws may perhaps prove inconvenient to him, and with whose interests, moreover, he is imperfectly acquainted? But you will speak at once to his reason, his heart, and his moral faculties, when you say, "You must defend her who is one day to form the happiness of your life. If you abandon her, her labours, her mind, her person, her inmost thoughts, will no longer be yours. March, fight, live or die for her; the eye of him who has made

her free is upon you ; he will protect the rights which he has given you." No requisition but that of love is necessary in calling forth the youth of a country. It is by motives such as these that nations, in a primitive state, excite each other to the defence of their homes ; it was thus that Sparta, Athens, and Rome, roused, in their days of fame, the courage of their inhabitants, and that they subjugated those nations that took up arms only from fear of their governors, or from mercenary considerations. Were you born in a country which was a prey to faction, covetousness, superstition, or robbery, you would still have pleasure in insulating yourself with a beloved object, in supporting, along with her, poverty, contempt, injury, oppression, calumny ; and if a continuation of life were denied you, you would find a happiness in dying along with her. " Place me," says Horace, " under the pole with my fair companion, and I will live happy there." Nothing conduces more to emigration than the feeling of love when in a state of persecution. This feeling has led to settling on spots of very unpromising appearance : fraternal harmony engrafts itself on a flourishing society ; but the conjugal alone can extend and propagate itself in the bosom of Nature.

Amiable children, choose in the age of innocence a model which may afford you a safe guide

in the age of passion. You, who have equally to dread corrupt society and the wanderings of your own hearts, follow, I entreat you, the path of Nature, which never leads astray. In a virtuous object, you find collected both the beauty that is scattered on the earth, and the virtue that is derived from heaven. Such an attachment will create in you the love of industry, along with courage, constancy, humanity, and piety. Cherish such affections early if you wish them to continue with you to the last. The attachments which remain till old age are generally those which have been formed in the early period of life, because youthful attachments are generally most innocent, and exempt from mercenary considerations.

But to whatever object you attach yourself, remember that it is transient like yourself. A day will come when you will no longer hear the voice of her you love, when she will cease to dwell in her accustomed habitation, or to direct her steps to meet you in the grove. What consolation can you then possess if you have not long accustomed yourself to put your hopes in Heaven? Comfort yourself with the hope of meeting your partner in another world. You may safely say to yourself, Why should I not so flatter myself? What would an insulated mind do even in Paradise? Cicero is delighted with the prospect of

meeting there with Lælius, Cato, Scipio, and other great men; a feeling entertained by him along with every sage. They seek solitude on earth that they may be out of the way of the perverse; in heaven they will seek society because it is the assemblage of the good. Doubtless the pure minds who, in a humble situation, have fulfilled the first duties of nature will be admitted there, as well as those who have held higher charges. It is the part of an affectionate heart, not only to love those whom it has left in this lower world, but to desire a union with them in heaven.

We have now passed in review all the harmonies in our globe, from those which unite insensible objects to those which animate mankind. We have endeavoured to sketch an attractive picture of plants, of mountains, of the ocean, and of the animal kingdom; while, in the last place, we have given our attention to him who, placed in the midst of this magnificent creation, has made himself master of all that surrounded him, and raised his thoughts to the feet of his Creator. Let us now quit the earth which he inhabits, and attempt to view those stars which excite our wonder, and that heaven which affords a final retreat to virtue and affection. Let us endeavour to arrive at a knowledge of the system of harmony prevailing in the orbs of the firmament.

We shall see how probable it is that the hand of the Creator has peopled them as it has peopled our world, and that, after making this world the abode of life and death, it has entered into his plans to provide, in an upper region, an abode for immortality.

BOOK IX.

HARMONIES OF THE SUN AND PLANETS.

MAN sees at first nothing in the sun but an orb of limited dimensions which conveys light and heat, and which rises daily in the east, to perform his circuit, until he sink down in the west. Less attentive to his movements than a child to those of his ball, we must generally have recourse to an almanack to learn the hours of his rising and setting, and the particular periods when his heat affects our vegetation. Yet, it is solely to his rays that the animation of nature is owing. They expand the air; liquefy frozen water; melt the polar ice; convey warmth to the ground, fertility to vegetables, colours to flowers, ripeness to fruit; and finally, they kindle love in the animal creation. Observe to what use his rays may be turned in the hands of man. Archimedes collected them with a burning mirror, and extracted from them a fire capable, not only of consuming ships, but of melting metals. To your eyes they appear pure and white; but

Newton, on decomposing them by means of a prism, found that they contained yellow, red, blue, and purple colours. They appear to you immovable, and they are incapable of shaking the slightest leaf; but Newton proved that, in coming from the sun to us, they must perform a distance of thirty-four millions of leagues in seven minutes and a half. It is, no doubt, in the operation of solar power that we are to look for the unknown causes of surprising phenomena, such as electricity, magnetism, the inclination and declination of the needle, &c. It is the sun that clothes the earth with green, and tinges the clouds with the colours of the rainbow: it is he who casts the fire of thunder on the south, and that of the Aurora Borealis on the poles: he attracts the planets, makes them revolve around him, and pours on their surface light, heat, motion, and life. He is the reservoir of the treasures of Nature; all the physical modifications of substances, their attractions, their movements, their duration, their generation, are perhaps contained in the globe of the sun, in the same way as all the combinations of size and shape are contained in a sphere.

The sun is a heavenly body, supposed to be 1,384,462 times as large as the earth. The planets all tend to him as to their centre, and would probably come in contact with him, did

not another force, operating in a direction perpendicular to the attractive power, oblige them to move forward and describe circles around him. The former force is called centripetal, or attractive; the second centrifugal, or projectile. Such, according to Newton, are the causes of the circular, or rather elliptic, movements of the planets. Kepler, called with considerable truth the legislator of astronomy, entertained nearly similar ideas to Newton. The sun, he said, in turning on his own axis, attracts the planets to him, and the latter are prevented from being brought too near him by revolving on their own axes, and because, when turning round the sun, they present him at one time a side which is attracted, and at another a side that is repelled. Newton's theory seems the more simple of the two, because he puts, or appears to put the two forces, centripetal and centrifugal in the sun himself; the first in his substance, the second in his motion; at least that is my conception of his views. This double effect, proceeding from the same cause, appears to me conformable to the general harmonies of the sun, which are both positive and negative. By his presence, he creates day, light, heat, motion, and life; by his absence, night, cold, rest, and death: the two, combining in a variety of ways, form the principal harmonies of nature.

I am of Brydone's opinion in conceiving that, had the laws of electricity been known a century sooner, Newton would probably have applied them to his astronomical system. The sun is an immense globe, which electrifies planetary bodies by his light. These bodies in their turn reflect his light by their opposite sides, or transmit it to their poles by means of *Auroræ Boreales*. In addition to these, the orb of day has a number of other unknown properties. Those who see nothing in him beyond a centripetal and centrifugal force, and who apply these qualities to the operations of Nature without taking any other law into the account, act just as wisely as a mason who, in building a magnificent palace, should pay attention to nothing but his level and plummet. Other laws doubtless belong to human architecture, and, in a stronger degree, to the works of the Divine Architect. I am not surprised that headstrong men, blinded by ambition and desirous of creating a party by removing all restraint from human passions, should endeavour to account for the actions of the Deity by means of the laws of mere matter; but I cannot help wondering greatly that a mind of the depth of Newton's, a mind which shed so much light on that part of Nature's works that are most difficult of comprehension, and which was so replete with respect for Nature's Author, should have

declared, in his controversy with Leibnitz, that God had made many things which have no other reason for their existence than his mere pleasure. According to Newton it is the same thing whether the planets move from west to east, or from east to west; I mean that he conceives that there is no reason for it in nature;—nothing, in short, but the will of the Supreme Being. Voltaire, who mentions this mode of reasoning, and the objections of Leibnitz, in his chapter *sur la Liberté de Dieu*, does not undertake to make any decision between them, and seems, by this hesitation, to give his assent to the doctrine of the English philosopher. I shall not dwell here on the specious arguments of Clarke in favour of the infinite liberty of God, because he seems to me to upset the argument himself by calling reason the will of the Supreme Being. “There is an end of feeling,” said Rousseau to me, speaking of Malebranche, “when we begin to reason;” to which I may add, that there is an end of reasoning when we begin to dispute. Newton gives, likewise, if I may be permitted to say so, a fatal blow to his system when he states to Leibnitz that he sees no reason why the planets should move from west to east rather than in the contrary direction. This reason exists in the centrifugal force of the sun, which, arising from the rotatory motion of his upper towards his lower

part, forces the planets to incline in the same manner towards him the side which receives his rays, and to lower their eastern by raising their western side. It is, moreover, evident that our earth has chains of mountains arranged in the same order. If, for example, the wind, which the sun raises at present under the line on the east side by means of the present motion of the globe, were to blow from the west by means of a contrary motion, it is certain that all the middle part of America would be deprived of the vapours of the Atlantic Ocean. It would consequently want those fine rivers which roll at present from west to east, and the clouds which would rise from the vast Southern Ocean would be fruitlessly attracted by the chain of the Cordilleras, no extent of continent lying on the other side of those immense mountains.

I may next be asked why the sun brings down his higher part towards us instead of raising his lower part. To this I must answer with Newton, that the cause is in the supreme pleasure of God. I have no hesitation in confessing my inability to comprehend the motives of infinite wisdom, any more than Newton, Clarke, Leibnitz, and a number of men who have reflected on his sublime works.

However great our obligations are to Newton, we must not imagine that he was altogether the

discoverer of the attraction of the planets ; we are to look on him rather as the calculator of the laws of attraction. Bacon had suspected the existence of such a cause ; and Kepler, as I have already said, had gone a certain length in applying it to the motions of the planets ; besides, it has been treated of from the highest antiquity. It is curious to see how Plutarch exerts himself to combat it in his treatise on the " Surface which appears at the Full Moon." He has no hesitation in considering attraction as one of the greatest absurdities of the human mind. " There are philosophers," he says, " who go the length of maintaining that the earth is round like a ball, as if our eyes did not tell us that its surface contains great heights and great depths. Yet, do they not argue that there are antipodes who live on opposite sides of the earth, and stick in all directions to its surface, as if they were cats which kept hold by their claws ? Do not these persons endeavour to persuade us that we are placed on the earth, not perpendicularly or at right angles, but leaning to one side like a drunken man ? Do they not conjure up tales, that if there were loads of hundreds of tons which fell into the depths of the earth, they would, on arriving at the central part, stop short and remain there, although not opposed or restrained by any other force ; and if perchance they should fall

with such violence as to go beyond this middle part, that they would return to it as soon as the effect of the violence should be removed? Do they not suppose that if an impetuous torrent ran and met that middle point, which they hold to be incorporeal, it would collect round that point, and remain perpetually suspended there? Is not this overturning all our ideas, since that which goes to the middle must, at this rate, be the lower part, while that which is under the middle of the earth must be the upper, so that if a man had his middle in the centre of the earth, he would have his feet and head both above it at the same time!" After hearing such an opinion from the man who had showed himself qualified to appreciate so justly the merit of Greek and Roman writers, what are we to conclude but that it is the lot of truth to be at first unknown and despised, and that every man who seeks it with sincerity, for the purpose of lodging it in his heart, ought always to leave the door of his judgment open to doubt.

It is proper to observe that the word *incorporeal*, applied by Plutarch to attraction, supposes a spiritual power operating on matter; a supposition which explains phenomena of every kind better than the name of "corporeal or material," which the advocates of attraction at the present day are in the habit of attributing to it, as a

quality resulting from matter. In truth, it may be asked in what body resides the attraction which makes the sun turn around in a circle?

Nor were the ancients strangers to the notion of centrifugal force, which they imagined to result from attraction or centripetal force. They were in the habit of reverting to it to account for the course of the planets. "If the moon," says Plutarch in the same treatise, "does not fall upon the Ethiopians, it is because she does not move agreeably to the pressure of her weight, her inclination being opposed by the power of her circular revolution, in the same way exactly as a flint, or whatever we throw from a sling, is prevented from falling, because it is whirled round and round with great violence."

The disciples of Pythagoras were aware of the motion of the planets around the sun, and calculated the distance of the moon from the earth at fifty-six semi-diameters, while we make it sixty semi-diameters; that is ninety-six thousand leagues for the mean distance. But all these truths, which are now so well demonstrated, are mixed, in Plutarch, with the most absurd notions; notions just as little compatible with philosophic precision as Pindar's poetical fancy that the earth is supported by pillars of diamonds. The notions of the ancients in regard to our planetary system, are handed down to us through the medium of

the imaginations of their philosophers and poets ; they may be compared to the ruins of an ancient temple, contemplated from an avenue beset with briars and brambles, but covered, it must be confessed, with flowers.

I have dwelt for some time on solar attraction, because it is the basis of the whole of our planetary system, and because it is diffused throughout all the parts of our globe. Each of these parts tends to a common centre, and exercises an attractive power on the others. It seems to me, moreover, to combine itself with positive and negative electricity ; that phenomenon appearing the consequence of the flux and reflux of fire, the greater part of electric bodies attracting when they are heated, and repelling after they have lost their heat.

The orb which produces these and so many other effects, in nature, appears to have a particular influence on our species. Although he is at a distance of thirty millions of leagues from us, and although his magnitude seems such as to justify the calculation of his breadth extending to 319,314 leagues, his apparent size on our horizon is not much greater than the breadth of the human face. He occupies half a degree in the firmament, so that it would require 720 suns to complete the round, and 360 to embrace a hemisphere from east to west. The last number

deserves notice from its being exactly the same as that of the division of our circle, which is formed of decimals taken originally from the number of our fingers. It is also very nearly the same as that of the days of the year. The course of the day would thus, by its natural divisions, be, in some degree, an image of the course of the year, in the same way as a circle of the horizon is an image of the globe; but we are not to expect to find in the infinite works of Nature such pointed terminations as in our limited calculations. A surplus or deficiency in one period is to be considered only as a link with another; all parts of the universe have points of connexion, and their perfection lies in the whole taken together. The approximations which I have just mentioned may, some day or other, suggest useful conclusions, and I am perhaps as much justified in supposing them to exist between the sun and man, as Newton was in supposing a relation between the seven primitive colours and the seven sounds in music. Moreover, we have observed in the "Studies of Nature," that the progress of a man along the surface of the earth was, in some degree, proportioned to that of the sun throughout the year; for a man can easily follow the change of seasons by going from one tropic to another at the rate of twelve or fifteen miles a day.

It would ill become man to pride himself on

the connexion which I have supposed to exist between him and the solar rays; he would be confounded at the idea of his own insignificance, could he but approach sufficiently near the sun to have any just conception of its magnitude. It is by no means enough to say that the sun is 1,384,462 times larger than the earth; a clearer idea of his magnitude will be conveyed by stating that, by means of a telescope, we discover spots on the sun's disk 1728 times as large as the earth, and which are not even perceptible to the naked eye.

It has always been matter of surprise with me that our painters and draughtsmen should have taken so much pains to represent flowers, shells, or foreign birds, and should even have undertaken voyages to India to exhibit insects of that part of the world seen through a microscope, while none of them has as yet attempted to represent the sun such as we see him through a telescope. The most admirable object in the universe is perhaps, of all others, the least known. We have planispheres of the sun very badly done, if I am to judge by that of the moon, which is very unlike the observations I have myself made on that planet with a twenty feet telescope. Astronomers have as yet ascertained only a few positions on the sun's disk, and expressed them merely by outlines; much in the way of our

geographers, who put the Alps and Cordilleras in their maps as detached molehills. It was indispensable for naturalists to travel in order to acquire and give us an idea of the chains of mountains which divide the globe, of their connexion with the ocean, of the arms with which they surround its gulfs, and to explain to us the causes and the sources of the rivers which irrigate the ground. If skilful artists had represented the sun such as we see it through a telescope, there is no doubt that they would have laid before us a number of facts which would have been useful in giving us an idea of its nature. Its disk, though apparently luminous throughout, does not shine in every part with equal splendour. A faithful exhibition of its appearance would have made us aware of its convexity on its planisphere, a point by no means attained by the charts of astronomers; and we should have seen, by the uniformity or inequality of its limb, whether it had not floating substances on its surface like a fluid, or mountains like the other planetary bodies. We might likewise have seen by the same means the correspondence between the different parts; and half tints on a map or drawing would have enabled us to comprehend a number of things better than any description. In fact, had my circumstances admitted of it, I should have travelled into England chiefly for the sake of looking at

the sun through Herschell's telescope, and thanking that great man for having given such extension to the knowledge and to the hopes of his fellow-creatures. Long caravans of pilgrims are in the habit of traversing every year a part of Asia to kiss a black stone at Mecca; and in our part of the world, numbers of well educated Europeans go to admire the ruins of Italy, Greece, and Egypt, those monuments of the frailty of the works of man: but no one leaves his country for the sake of obtaining a more extensive view of the most magnificent work of the Divinity. Yet the uncivilized Peruvians, and the poor negroes of Africa, would, in all probability, undertake, without hesitation, a voyage to Europe, merely to behold the sun through our telescopes, were they at all aware of the wonderful effects of our optical instruments.

Herschell's telescope magnifies to the extent of 4000 times; that is, six or seven times more than the best instruments of the kind made before his time. Would it not be practicable to increase its power? The solar microscope invented by Lieberkhun produces a still greater effect, for I have seen through it a flea made to appear larger than a sheep, and exhibited with perfect correctness. Could we not render a small portion of the sun visible by means of the solar microscope itself? I throw out this idea merely as the suggestion of a

person very little skilled in such matters; but let it be remembered, that it is not five centuries since our ancestors first thought of making spectacles of glass. At the end of another century, they made, with spectacle glasses, perspectives of considerable power, and gravely imagined that they were at a *ne plus ultra*, when Newton invented the reflecting telescope. Nobody conceived that it was possible to see farther than Newton had done until Herschell gave so great an extension to the power of this instrument: and why should not an optician carry it still farther than Herschell? Cannot the telescope be made to extend the sight of man into that which is infinitely great, as much as the microscope into that which is infinitely small?

Newton and other astronomers maintain that the sun is a globe of fire, the heat of which is twenty thousand times greater than that of a red hot ball, and that he turns round his axis in twenty-five days and a half. He is covered, according to them, with a fiery sea which is incessantly boiling, and produces foam or froth, which to our observation appears on his surface in the form of spots. They add that it is from the rotatory motion of that frothy matter on his surface, that they have been able to infer the rotatory motion of his globe. Such is the result of their observations, founded, as they were, on the ancient

telescope ; but Herschell, the Columbus of astronomers, has very lately overturned this fine theory by the aid of his new instrument. He has observed, over and over again, that the sun is a solid planetary body, surrounded, at the distance of fifteen hundred leagues, with a luminous and undulating atmosphere of the height of from six to nine thousand leagues. This atmosphere has sometimes partial openings, and allows the philosophic spectator to perceive under it parts of the solar disk which are by no means spots or foamy surfaces, but actual mountains and valleys. Herschell declares that he has repeated these observations so often as to render them no longer doubtful. On a point of this nature, it would be wrong to refuse our confidence to an astronomer who has had the skill to discover, by means of the same telescope, the new planet that bears his name or that of his Sovereign, and the two satellites which accompany it, along with two new satellites of Saturn, and several volcanoes in the moon.

Herschell remarks, very properly, that Newton's calculations in regard to the immediate heat of the sun are devoid of foundation, as they rest only on that which the sun communicates to the earth ; and which exists there only through the medium of an atmosphere. Without that medium the solar rays would have no such power, even

in the torrid zone. This is demonstrated by the summits of the Cordilleras, which, although in the middle of the torrid zone, are always frozen, because they are above the warm part of the atmosphere. Herschell concludes accordingly that the sun, being neither a globe of fire nor a burning sea, but a planetary body, is habitable. If I am permitted to add my feeble arguments to the sublime experiments of this great man, I should say that I find several additional inconsistencies in the system of the astronomers, such as the following:—

1. Did the sun consist wholly of fire, he would be flattened towards his poles, and dilated towards his equator, by means of centrifugal force.

2. If the spots perceived on his surface were of foam, they could not appear dark on a globe twenty thousand times hotter than a red hot ball. Nothing but the operation of air blackens or affects the surface of burning bodies, and were there an atmosphere of air around the sun, it would be too much rarefied to act on the surface of such a furnace. A coal in a crucible, or a ball in a forge, becomes quite white when impregnated with fire.

3. The consequence would be that the proofs of the sun's rotation on his axis would be involved in much doubt, as they would be supported only by arguments drawn from the appearance of moving foam, which may be carried along by

particular currents on a globe in a state of fusion. This would be much the same as if astronomers stationed in the sun should conclude that there was a rotatory motion on the earth from one pole to the other, by observing the icy masses which, when melted, descend from the poles every season towards the equator. Let us frankly confess that the edifice of our science is very imperfect, and that the most dexterous among us have not as yet been able to raise around them any thing better than a slender scaffolding.

Herschell's idea of the sun pleases me exceedingly. It seems to me the more probable, as it is the only one that is conformable to the general plans of Nature, who, as we have already remarked, has infinite variety in her works, and never makes any thing in vain. The sun seems twelve hundred thousand times as large as all the other planets taken together; and were he a globe of fire destined for no other purpose than to convey heat, the source of light and heat would be far greater than the habitable spheres warmed and illuminated by it. This is at variance both with probability in a general sense, and with the particular case of the satellites appointed to reflect his light; those are all smaller than the planets which they warm and enlighten. My imagination is likewise gratified with the idea of the sun conveying animation to the world without show-

ing himself to our eyes otherwise than by the glory that surrounds him. I believe that if his elements are the same as in our planet, they must be subject to other laws, and that he is not only habitable, but possessed of enjoyments far superior to those of minor orbs. May we not be justified in concluding that there is no shade under an atmosphere of light, no night at the fountain of day, and no winter at the centre of warmth?

Plato said that our world was only an outline or image of a real world, and that there existed another, in which were realized those things of which we had only the shadows. If there is any foundation for this doctrine, we may be permitted to imagine that the sun is the world which answers that description. Some fanciful reasoners have extended these speculations farther, by supposing that great part of the substance of the sun is of gold; because gold is the heaviest substance that we know of, and consequently suitable to the position of the sun, stationed as he is, in the midst of the universe. His light, like gold, is yellow, indestructible, and infinitely divisible; it gilds every object on which it strikes, and seems, even in this lower world, to be gold in a volatilized state. If we collect the solar rays at the focus of a burning mirror, and expose gold to their operation, we find that metal assume, on being

melted, a rich purple colour; small globules arising from it, circulating in the air amidst the rays, and attracting each other. The sun's light, active and rapid as it is, possesses considerable weight; it is found to increase perceptibly the weight of all the bodies which it penetrates, and it has long been said to be the cause of the formation of gold under the surface of the earth. That notion, strange as it may seem, is supported by the circumstance that gold mines are generally situated in the mountains of the torrid zone; and if the gold found in Siberia appear an exception to this, the difficulty may be solved by the consideration that that country was formerly a part of the torrid zone, as seems probable from the discovery of elephants' bones in a fossile state. It is worth noticing that the chemists of antiquity gave names to metals from qualities analogous to the planets; that gold was designated by the sun, silver by the moon, quicksilver by Mercury, copper by Venus, iron by Mars, and lead by Saturn. It is certain that these metals hold in the estimate of men, and with reference to their value in gold, the same rank which the co-relative planets occupy in the Heavens with reference to their distance from the sun. I conclude from this that our astronomical system is a good deal more ancient than we imagine. The moon alone is an exception from

the above-mentioned arrangement ; but it may be said, on the other hand, that next to the sun, she, of all planetary bodies, exercises the greatest influence on us. So that relatively to us, she deserves the second place as much as silver does to gold. The comparison of the sun to gold might be extended by dwelling on that metal as the prime mover of human societies, as the sun is of the universe. Gold puts into action all the social harmonies, as well among civilized as among savage nations. Some financiers, with the intention, I suspect, of rendering us indifferent to it, and transporting it into their own coffers, think fit to speak of it as an ideal and fictitious sign of national wealth, the want of which may be easily made up by another ; but mankind in general consider it to have an intrinsic value, and were it possible that it should lose its credit among nations, or cease to circulate among them, most governments would, in my opinion, be on the high road to a revolution ; with the exception indeed of those petty tribes, of whom we have heard from philosophers, but whom we have not the happiness to know, where virtue, and not selfishness, is said to be the predominating rule of conduct.

A relation evidently exists between the solar rays and those precious stones which contain a decomposition of the primitive colours of those

rays, such as diamonds, topazes, rubies, sapphires, &c. The mines of these, like the mines of gold, are not dispersed over the globe at large, but confined to the mountains and valleys of the torrid zone. It is there also that the most aromatic vegetables are produced ; frankincense, cinnamon, cloves, &c. the perfumes of which probably arise from the extraordinary influence of the sun on that zone, since these trees are found to degenerate if removed out of it.

We have seen that the sphere contained in itself every variety of shape, and we may consequently imagine that the sun, a living and vivifying sphere, must present the most beautiful forms in the vast contours of his mountains and valleys. What immense mountains must those be, which appear to us so much larger than any that we have on our earth ! We are not to look there, as in our globe, for rocks broken into fragments by the severity of winter ; for mountains worn down by torrents, promontories formed and destroyed by the sea, a globe expiring and reviving in the midst of its ruins ; we are to look there for a world enjoying all the perfections of beauty and all the fulness of life. Smiling valleys must be lost in horizons a hundred times more extensive than ours ; Alps surpassing ours in the same proportion, presenting in their shape specimens of the most perfect curves, must carry their

summits, not, as in our earth, to a frozen atmosphere, but to the bosom of that atmosphere of life which gives animation to distant worlds. A poet may picture there rocks of diamonds, emeralds, and rubies, sparkling with a brilliancy which the eyes of mortals could not sustain; and imagination may figure to itself their dazzling surface resplendent with the reflections of morn, and pouring forth streams of the richest light. We are not to suppose that light harmonizes there with shade, summer with winter, or life with death; it is more agreeable to the magnificence of the object to consider light as combined with light, spring with spring, and life with life. In such a region, fancy may be allowed to anticipate that silence of any kind is rest, that every noise is melody, and every odour a perfume. A description of our earth presents us with names that are either unmeaning or expressive of powers which have put it in confusion: on one side, we have the Island of the Volcano; on another, the Cape of Storms; and the names of New Spain, New England, and New France, derived from countries notorious for their sanguinary contests, are applied to portions of the innocent America. But a description of the sun conveyed in poetical language would give to a delighted reader a picture of objects for which we seek in vain on the earth, and of which our

instincts offer us only a fugitive image. In the innumerable curves of the sun might be found the quadrature of the circle, and the union of the hyperbole to its assymptotes : in its virgin soil the solar rays in a fixed state in gold ; and in their luminous and undulating atmosphere, the volatilization of gold in rays of light. Imagination might figure to itself perpetual motion existing at the source of motion, and ever-during youth at the source of life and beauty. In a region so far superior to ours, love may be fancied to be perpetual, genius may be supposed to sit delighted, in contemplation, on a commanding eminence, and consolation to be poured out in the retirement of a grotto. We may figure to ourselves that such influences are extended to our earth from this abode of bliss, and that they fall from time to time on the head of the virtuous. They enlightened your mind, immortal Newton, when you decomposed light, and calculated the weight of worlds ; they impressed you likewise, unfortunate Rousseau, when, having reached the end of your career in this lower world, you exclaimed in your dying hour : “ Oh ! how beautiful is the sun ! I feel as if he called my soul towards him.”

Poets bear in Latin the name of *vates*, as if inspired with prophetic knowledge ; and why, it may be asked, should not virtuous men receive a similar designation ? Fenelon had a title, both

from his power of imagination and from his virtuous character, to receive any compliment of this kind that language allows, and I extract with pleasure from his *Télémaque*, his beautiful picture of the fancied abode of the happy in the Elysian fields.

“The day has there no end, and night with her dark veil is unknown; a pure and mild light is spread around these amiable men, and surrounds them with rays as with a garment. This light is not like that which comes before the eyes of feeble mortals, and which, in truth, is but darkness; it is rather a celestial glory than light. It penetrates the thickest substances with more subtilty than the solar rays penetrate the purest crystal; it never dazzles, but, on the other hand, strengthens the eyes, and carries serenity to the inmost recesses of the soul. It is by it alone that the blessed are nourished; it comes forth from them and it enters into them again; it penetrates and becomes incorporated with them, as food becomes incorporated with us; they see, they feel, and they breathe it; it excites in them an inexhaustible source of peace and joy; they are plunged into this delicious abyss like fishes into the sea. All their wishes are gratified, and the fulness of their enjoyment raises them above all that avaricious and ambitious men desire upon earth.”

Virgil had previously applied, to the inhabitants of Elysium, verses which I am strongly tempted to apply to the inhabitants of the sun.

Largior hic campos æther et lumine vestit
Purpureo ; solemque suum, sua sidera, norunt.

ÆNEID. VI. 640.

The verdant fields with those of Heaven may vie,
With ether vested, and a purple sky :
The blissful seats of happy souls below,
Stars of their own, and their own suns, they know.

The situation of this orb in the centre of the universe, and the Nature of his vivifying light, concur to justify the imagination of a writer in dwelling on the sun as the probable seat of a degree of enjoyment far beyond what this world affords. What would be the object of the works of the Deity, were there not beings in a state to enjoy them? Would not their chief beauty be lost? The moss, humble as it is, has insects to contemplate it ; the world must likewise have its spectators. The parts of the earth that come under our observation, however agreeable they appear to us, are but extremely small portions of the whole. Our pleasure is increased by approximation ; we experience gratification at the sight of a mere flower, and it is augmented by that of the plant which has produced it : a farther increase takes place on looking at the enamelled meadow, or the flock of sheep who find a pasture

there : it becomes still more affecting on beholding the shepherdess spinning the wool of her ewes, while her lover, with his dog, preserves the flock from harm. The sight of a neighbouring hamlet, composed of laborious and innocent families, gives additional interest to the scene ; but our command of comfort seldom goes beyond the horizon that bounds our view, and fortunate indeed is he with whom it extends so far. If he venture to go to a distance from it, a difference in manners, in laws, in language ; the occurrence of quarrels, controversies, and cruel wars ; are apt to make him entertain a doubt whether his own species are not his enemies. Thus, in the little corner that we inhabit, our view embraces neither the sphere of life nor that of the earth ; we enjoy only the day-light that shines on us, and the horizon that surrounds us ; the revolutions of time and of generations often appear to us only as a monotonous circle of days and nights, of summers and winters, of births and deaths. Placed on a point of its circumference, the universe appears to us like a figure painted in perspective on concentric circles ; amidst some agreeable colours, it presents us on the whole with an irregular combination ; but place in its centre the cylindrical mirror, which collects its scattered parts, and instead of a deformed object you will behold a Venus.

The case would be the same were it possible to contemplate it from the sun ; the spectator would behold it across that wondrous atmosphere of light which, like a living crystal, surrounds the eye of our universe. The rays which it sends forth are perhaps similar to those which issue from our eyes, which convey in some measure an outward expression of our emotion and passions, but without manifesting the images received within. These rays may be compared to those long-sighted glasses which represent an object at one end as nearer, at another as more distant. Newton decomposed the solar rays at the extremity touching the ground ; but he perceived there nothing but colours, though they no doubt possess many other qualities, as is shown by the vast number of products which they are the cause of bringing into life.

From such a situation as the sun, it might be practicable to see the earth turn around on its axis, and display the whole range of its circumference. An aërial spectator might, from such a spot, see its continent forming innumerable harmonies with the sea, and exposing successively the torrid, temperate, and frozen zones to the influence of the solar rays. He might see morning and evening, day and night, winter and summer, succeed each other, and become displayed throughout a whole hemisphere.

A fanciful writer might still give reins to his imagination, and suppose that an observer, placed in the sun, might perceive similar harmonies repeated on a grand scale throughout the other planets. The sun makes Mercury roll around him at the distance of eleven millions of leagues, and Venus at the distance of twenty-two millions; the earth is at a distance of thirty-four millions of leagues; the red-coloured Mars at forty-six millions; the azure Jupiter is computed to be at the distance of a hundred and fifty-six millions, and Saturn at no less than three hundred millions. All these, however, are inferior to the distance of the planet discovered by Herschell, and supposed to be six hundred and fifty-five millions of leagues from the sun:—comets are conceived to roll at a still greater distance.

Let us suppose a spectator placed in the sun in the midst of this planetary motion; not only might he see the planets turn around us in their perigeum, that is when they are on the side of the earth, but likewise in their apogeum, I mean when they are on the opposite side of the sun, because that orb turns round on its own axis in twenty-five days and a half. The probability is that he would see the planets on a great scale in their perihelion, that is when they are nearest the sun, as well as in their aphelion, when at the greatest distance from him; for they describe

around him, not circles properly speaking, but ellipses. A position in the sun might give a scientific observer of the surrounding planets that commanding view which, in the case of some insects, is said to unite the advantage of the microscope and telescope. Bees are believed to be able to see from the same spot the nectarine glands in the calyx of the little flower where they suck their honey, and the distant hive to which they are to carry it. The range of our eye-sight on this humble globe is in proportion to their horizon ; but in an upper orb there is no reason to imagine that it would have limits of that description. The sun being the cause of all sight and all motion, it seems no extravagant conclusion to infer that its inhabitants have a share of knowledge very different from those of inferior planets. It deserves to be considered the abode of truth as well as of light. On earth, our knowledge does not go beyond a few scattered harmonies of days, months, seasons, years, and lives ; but the inhabitants of the sun may be supposed to judge by another measure, and to be witnesses of innumerable combinations of which we have no idea.

Planets are easily distinguished from fixed stars, inasmuch as they do not sparkle but reflect steadily the light which they receive from the sun. God may have composed them of different ele-

ments from the earth ; but as we perceive in them, by aid of our telescopes, atmospheres, mountains, and valleys ; as several of them have moons like the earth, and as they go through similar curves and periods, there seems no reason to doubt their being fundamentally of the same nature, however different in various respects. They serve, in all probability, as the habitation of organized beings ; Nature has made nothing in vain, and what would be the use of desert globes ? There must be vegetable products in them, because there is heat ; there must be eyes, because there is light ; and there must be intelligent beings, because intelligence is displayed in their formation. There exist probably, in the planets, plants and animals whose growth is proportioned, as with us, to the nature of climate and the duration of life. The mallows and the fern of Europe become trees in the southern parts of Africa and America, and if the same zones in this globe offer a material difference in regard to the nature of their productions, much more are we to look for the existence of such a difference between the earth and other planets. On the other hand, it is fit to remark that the human stature is the same in almost every part of the earth ; no difference is caused by latitude ; none by the relative situations of islands or continents. As Providence has given one sun to the system of planets, it seems not

unlikely that there may be a considerable resemblance between the rational beings who occupy those different planets. It is a curious calculation that, by setting out and regulating our progress with a view to follow the course of the sun, we should in half a year go from one tropic to another, traverse the half of a hemisphere in the course of a year, and all the latitudes and longitudes of our globe in the ordinary period of life.

Solar Harmonies of Mercury.

MERCURY is understood to be fifteen times smaller than the earth, and describes, at the distance of eleven millions of leagues from the sun, an annual circle of eighty-seven of our days, twenty-three hours, fourteen minutes, and thirty-three seconds. His rotation on his own axis, or in other words the length of his day, has hitherto eluded the observation of our astronomers, because to an observer placed on our globe he appears as if lost in the rays of the sun. Yet to judge by analogy with the length of the day in Venus in the torrid zone, which is of twenty-five of our days, and with the shortness of the day in Jupiter in the frozen zone, which is only of ten hours, it is possible that the days in Mercury may continue during the whole of his course, so that one of his hemispheres would be lighted without interruption during the space of six weeks. This would suggest the conclusion that a body turning rapidly before the fire is more penetrated with heat than one which turns slowly, which seems contrary to our physical laws. At the same time, there is no doubt that motion increases the operation of fire, and that a planetary body in the neighbourhood of the sun, by turn-

ing its hemisphere towards it for a long time together, will give the opposite part time to cool.

I see no reason to conclude with Newton that the degree of heat in Mercury is seven times greater than in our torrid zone, or that water should there be constantly in a boiling state. Heat, being only a harmony of air and the solar rays, may be very slight at the tops of the mountains of Mercury, if they are much elevated above his atmosphere, as in the case of the Cordilleras, which are covered with ice though in the bosom of the torrid zone. This is conformable to the notion of astronomers, who attribute to the height of the rocks in Mercury the brilliant reflections which he sends us when in his perigeum. I am inclined to think that their splendour is owing to their being covered with ice, an opinion which receives confirmation from the circumstance that Mercury, in all his brilliancy, shows occasionally dark spots. This darkness cannot, in my opinion, proceed from tracts of sea which are naturally resplendent, but from the soil of his mountains, the ice of which melts at certain periods. To judge from appearances we would say that his frozen zone lies in the situation of our torrid zone, that in his annual course he inclines the plane of his orbit ninety degrees on his equator, and that the solstices are in his poles. From this it might seem that, in contradistinction to our globe, his poles

are his best inhabited parts, and that they are refreshed by a periodical melting of ice descending from the lofty mountains of his equator, mountains to which the height of ours in Ethiopia must be comparatively very trifling. The most magnificent products of our Indies must be far inferior to the riches of a planet exposed, like Mercury, to the complete influence of the solar rays. Vegetable products, receiving warmth and light during six weeks in succession, must arrive at an extent of growth and perfection which can be compared only to those of the vegetable products of the sun himself. Fancy may imagine the sugar-cane rising in such a spot to the height of the bamboos of the Ganges, and the sweet-scented vanilla extending its twigs in the forests as far as the long lianas of America. The powers of Nature, which in our globe reach their highest period in the torrid zone, seem circumscribed to their present range only because solar power has not carried them farther; but in Mercury they, in all probability, form new harmonies with the sun, and create, in minerals, vegetables, and animals, a variety of genera of which no Linnæus in our world has any conception. Imagination may figure to itself that the inhabitants of Mercury have no occasion to submit to exhausting labours, nor to support life by the death of innocent animals. In a region so happily exposed to solar

heat, we may fancy fruits ten times more delicious than those of our orchards, growing spontaneously in a planet, whose poles, from their temperature, ought to produce our richest tropical products, such as litchis and mangostans. Their globe is not above a third of ours in circumference; but if any faith is to put in the observations of our telescopes, its surface must be much more difficult to travel over, on account of the ruggedness of its rocks, and of the icy zone which divides it into two hemispheres. If the length of life of the inhabitants of this planet bear any proportion to its extent, and to a year of three months, its term is probably shorter than with us. A poet, judging of their manners by those of the nations who in our planet have lived under the warmest latitudes, might figure to himself a resemblance between them and those of the honest Ethiopians, on whom Homer represents Jupiter as casting his eyes to obtain relief from the scenes of carnage exhibited in the battles between the Greeks and Trojans. Or, situated as they are in the midst of the rich productions of Nature, he may suppose them similar to those Indian sages, immersed in mild and sublime meditation, among whom the ancient philosophers of Europe are said to have travelled in quest of knowledge. The sun must appear to the inhabitants of Mercury three times as large

as to us. How great must be their delight when his atmosphere discloses itself in beams of light, and opens to their view those heavenly regions, whence flow the immortal sources of life and intelligence.

Solar Harmonies of Venus.

MERCURY passed among the ancients for the planet of intelligence and science. At a farther distance of eleven millions of leagues, and at twenty-two millions of leagues from the sun, is Venus, who has been considered, time immemorial, the planet of love. She owes her name to her splendour, for she appears the most brilliant planet of any to the inhabitants of our globe. She has long been called Lucifer, or the morning star, when she precedes the rising of the sun, or Vesper when she comes forth after his setting. Her diameter appears to be about a ninth smaller than that of the earth; her year to consist of two hundred and twenty four days, sixteen hours, forty-one minutes, and forty-one seconds. Her day, by which I mean her revolution on her own axis, takes place in twenty-three of our hours according to Cassini, who made observations to that effect, in 1700, with a sixteen feet telescope, which made this planet appear to him about three times the size of the moon with the naked eye. But in 1726, Cardinal de Polignac having put up at Rome a telescope of Campani, a hundred and fifty palms in length, a celebrated Italian astronomer, of the name of Bianchini, made use of it, in the months of February and March of that

year, for the purpose of observing Venus, and discovered seven principal spots near her equator, and two near her poles. From their revolutions he concluded that this planet turned on her own axis, not in twenty-three hours, as Cassini had imagined, but in twenty-four days and eight hours. The latter calculation has been lately confirmed by another astronomer, and seems to agree with the laws of rotation in some other planets, the rapidity of whose rotatory movement appears to be in an inverse ratio to their distance from the sun. I imagine therefore that Venus, distant twenty-two millions of leagues from the sun, turns on her own axis in nearly twenty-five days; in the same way as the earth, distant from the sun thirty-four millions of leagues, turns on her own axis in twenty-four hours, and Jupiter, at a still greater distance, in ten hours. But the heavenly bodies are, doubtless, governed by laws totally unknown to us, and inexplicable either by attractive or centrifugal powers; for Mars, who is forty six millions of leagues distant from the sun, revolves round his axis in nearly the same time as the earth; and Saturn, though perhaps three hundred millions of leagues away from the Sun, agreeably to a late discovery of Herschell, revolves round his axis in nearly the same time as Jupiter. As to the inclinations of their equator on

their orbits, it would be equally imprudent to attempt subjecting them to mechanical laws, for the inclination of Venus is seventy-one degrees, thirty-six minutes, and forty seconds; that of the earth twenty-three and a half degrees; that of Jupiter two degrees, fifty-five minutes. Were it permitted me to hazard a conjecture in regard to movements so far beyond our means of knowledge, I would say that the inclinations of the axes of planets to their orbits change imperceptibly, and that they are ordained, not only for the purpose of producing harmony by the variety of days and seasons, but even by that of years and ages. The consequence is that the poles and the latitudes of each planet undergo a certain variation after the lapse of a long period of time; as I endeavoured to show in the part of the work where I treated of the apparent change of the poles of our globe.

Nature has not only established different zones around each planet, but makes a farther contrast between zones of the same denomination. Every double zone in our globe may be divided into terrestrial and aquatic; the former containing more land than sea, and having consequently greater warmth; such are those of our northern hemisphere. The latter contain more sea than land, and are colder; such are those which compose our southern hemisphere, the pole of which

is situated in the midst of an aquatic world, as our north pole is in the midst of a continent.— We have thus two torrid zones at the right and left of the equator; the northern, containing the burning sands of Africa and the peninsulas of India, the inhabitants of which are almost entirely black; the southern, containing Brazil, Peru, and a number of islands of a temperate climate in the South Sea, the inhabitants of which are considerably fairer. This is the difference to which I alluded as existing between two kindred zones, and something analogous to it may be observed in the situation of the two torrid planets, of which Mercury, being nearer the sun, is necessarily warmer than Venus.

Be this as it may, it has been ascertained by observation that the mountains of Venus are higher than those of the moon; that is, they are more than three leagues in perpendicular height. Her surface appears to be quite full of them, and if we suppose her atmosphere to be at all similar to ours, their tops must be covered with frost or snow to a much greater height than the Cordilleras. Herschell is of opinion that the atmosphere of Venus must be very dense, because the spots on her are not very perceptible. This density may, perhaps, arise from the vapours of her waters; she seems covered with them in many places, and probably owes her splendour

to the reflection of the solar rays on them.— These numerous pyramids seem to me to imply that Venus abounds with islands and with peaks five or six times as high as that of Teneriffe. A poet may here imagine beautiful cascades flowing from the mountain sides, and irrigating their verdant slopes. Suppose the glaciers of Switzerland with their torrents, their lakes, their meadows, and their firs, in the midst of our Southern Ocean; join to them the beautiful eminences on the banks of our Loire, crowned with vines, and with all kinds of fruit trees; add to their bases the shores of the Moluccas, covered with groves of plantains, nutmegs, and cloves, whose sweet perfumes are transported by the winds, while their branches are tenanted by the humming-birds and the turtle-doves, whose songs and gentle murmurs are repeated by the echoes. Imagine the madrepores of the Indian Ocean, and the coral of the Mediterranean, growing, in consequence of a perpetual summer, to the height of lofty trees in the midst of the seas which bathe them; rising above the waves during a reflux of twenty-five days, and joining their scarlet and purple colour to the verdure of the palm:— add to this, currents of transparent water reflecting all these beautiful objects, and you may have some idea of the beauties which a warm imagination would conceive as likely to be found in the

planet of Venus. As the sun rises at the solstice more than sixty-one degrees above her equator, the pole which it enlightens may be supposed to have as mild a temperature as that of our spring. Although the long nights of this planet are not lighted by a moon, Mercury, by his splendour and his vicinity, as well as the earth, by her size, may be said to supply the deficiency. The correspondence of Venus with the earth, in point of magnitude, seems to favour the notion of a similar correspondence in other respects. But as her greater vicinity to the sun renders her, in all probability, more fortunate in point of temperature, we may allow some latitude to the fancy of those who indulge in drawing pictures of the beauty of her scenery and the happiness of its occupants; who exhibit them as renovating the golden age by leading the life of shepherds in the hills and groves; or sporting in the festive dance on the borders of their romantic islands.

Solar Harmonies of the Earth.

THE earth is at the distance of ten millions of leagues from Venus, and of thirty-four millions of leagues from the sun. Her diameter is 2865 leagues ; her rotation on her axis is performed in twenty-four hours, and her revolution round the sun in three hundred and sixty-five days, five hours, forty-eight minutes, and twelve seconds. We have already remarked that this number of days, or of revolutions on her axis, corresponded nearly to the number of apparent diameters of the sun which might be contained in our ærial hemispheres extending from east to west. Solar harmonies probably exist with different proportions on the horizons of the other planets ; and may serve to determine their hours as well as ours, in the same way that their rotation on their axis determines their days, and their revolutions round the sun their years.

The apparent diameter of the sun might be adopted by us as a rule for a fixed and permanent measure. There would be no difficulty in having it on a plane mirror, by cutting a sheet of paper of the size of the image at the spring equinox, and preferably at mid-day, when the sun is perfectly raised above the vapours of the horizon ; but our astronomers have given a pre-

ference to the length of the pendulum, although more subject to variation.

The earth, on turning round on her axis, presents to the sun, in the course of the day, her upper and lower hemisphere in succession; and, by turning around him obliquely in the course of a year, she presents, in succession, her northern and southern hemisphere. It is this oblique movement which forms, as is well known, the inequality of our day and night; and which gives alternately to each hemisphere spring, autumn, winter, and summer. To form an idea of this, we must consider the earth as rolling round the sun in the course of a year, so that the half of its equator is six months above and six months below its orbit, without its north pole losing its direction towards the polar star. The greatest obliquity of its equator to its orbit is twenty-three degrees and a half, and that obliquity takes place at one of the solstices; while, at the other solstice, an obliquity occurs in an opposite direction, and of the same degree of inclination. This alternate obliquity seems to proceed from the centre of gravity of the two hemispheres, the one of which is alternately heavier than the other. The vapours which the sun raises from the ocean, by means of his heat, accumulate on the pole, which does not, at the season in question, receive his light, so as to form regions of ice of many

hundred leagues in extent, and probably of several leagues in height. In the progress of the season this pole draws nearer to the sun, while the opposite pole goes to a distance from him. The quantity of accumulated ice is gradually diminished, and its weight lessened by the presence of the sun, which warms it during six months, until the opposite pole having, in its turn, become heavier by the absence of the sun, which causes the accumulation of fresh ice on it, resumes its former inclination. From these successive movements of the poles, which date from the two equinoxes, arise the the two great currents of the ocean, generated by the alternate melting of polar ice, and which, in our spring, take a southern direction, while, during our winter, they issue from the south pole, and hold their course to the north. They bring with them, not only a vast quantity of water, but blocks of ice, as high as mountains and large as islands.

I am inclined to think that the power of the ocean, and of the solar heat, are the great causes of the movements of the earth, in the same way as they are the causes of a diversity of temperature. M. Mairan, the celebrated mathematician, has adduced arguments to show that the mere operation of solar heat on the hemisphere of a planet was sufficient to make it turn, and men of science applauded his mode of reasoning. I am

not aware in what manner he conceives that this action of the sun may be applied to the satellites of the planets which have no rotatory movement on their own axis; but it is certain that our ocean, which forms, by means of congelation, two enormous counterpoises on its poles, must exercise an influence on all the movements of our globe; for it circulates around and throughout our globe, like sap in vegetables, and blood in animals. Next to the sun, it is the prime mover of all the circulations in our atmosphere, just as much as the water which turns the great wheel of a machine is the main-spring of its operations.

Whatever difference of opinion may exist on this head, it is clear that if the earth were to present no part but its equator to the sun, as would be the case on the simple laws of gravitation, the ice at the poles would never melt. Its masses would be in a course of progressive augmentation; the ocean would no longer have half-yearly currents, arising from thaws produced by the alternate action of the sun on the northern and southern hemisphere, nor would it have those tides produced nearly twice a-day, which appear to me the consequence of those general currents. What else would be the ultimate consequence than first a great diminution, and, in the course of ages, a total absorption of the waters of the ocean: the vapours, at present extracted from the atmo-

sphere, could no longer be supplied nor appropriated to feed our rivers: no zone, except the torrid, would be habitable, and the extent of that zone would not be considerable, as the greater part of the globe would be covered with ice, in the same way as its northern part at present is in the month of March. To a spectator with a telescope, in another planet, our earth would have a white and splendid appearance at each side, while the torrid zone would appear to form a dark belt around it.

I am now to question a few ideas brought forward by astronomers. Some of them assert that the brilliant parts which we perceive in planets are their continents, and that their spots are seas. This appears to me very contrary to probability. If, in your room, the water in an earthen vase be exposed to the sun's rays, they will be reflected, not by the vase, but by the water; you will see the trembling light of the water vacillate on your ceiling, and it will be much brighter than any reflection from your floor, or from any rough substance. If you cast your eyes on a landscape, the distant hills appear of a dark-blue; but the rivers may be distinguished in the midst of green meadows by their azure and silver colouring. The case is the same in regard to the appearance of the sea, in which the islands appear darker than the water, and it is even by their brownish

tints that we are enabled to distinguish them from the clouds on the horizon. The only exception from this takes place in the summits of their mountains, when covered with snow, for they are then very brilliant; but the rest of the island looks dark, although the sun shines on it, of which I have been an eye-witness in passing the Peak of Teneriffe, at the distance of twenty leagues. These effects are understood by all painters, and show that astronomers would do well to communicate with them; for, if it be the province of the latter to determine the distances of objects by means of their instruments, the former, being more in the habit of studying the harmonies of Nature, are more capable of expressing them by means of the pencil. The reverberation of the solar rays on water is even so strong as to occasion, in summer, what we call strokes of the sun; nor is it less considerable on clouds and fogs, although the latter, it is pretended, sometimes obscure the planets. There seems no doubt that clouds and fogs obscure the splendour of our sky, when they are either thick or in great quantity, and when they are interposed between the sun and the spectator, as is the case when we see them from the bottom of a valley; but when we are raised above them, and look down on them from the top of a lofty mountain, they appear brilliant like the surface of a lake. Even in the ordinary

atmosphere we see them frequently of this brilliant appearance, when united in masses and lighted by the solar rays. They have then a dazzling whiteness, as if they were a snowy portion of the Alps suspended in the air. Such considerations as these are of great importance, and will be useful in explaining the causes of those round belts, at one time dark, at another time luminous, which we perceive in Mars, Jupiter, and Saturn.

I have already treated so fully of the harmonies of the different powers of Nature, that there remains little else to say on the subject of our globe. As it rolls at a considerable distance from the sun, Providence has given it a companion and satellite in the moon, which reflects the solar rays on our globe, particularly towards our poles. The diameter of the moon is about a fourth of that of the earth, that is 782 leagues: she is 85,792 leagues from us at her mean distance, and she performs her revolution around us in twenty-nine days, twelve hours, forty-four minutes, and three seconds. She reflects the solar rays on us in a variety of shapes, appearing by turns as a crescent, as completely round, or as a decreasing circle. When in her full, her light shines day and night, without interruption, on that pole which is abandoned for a season by the sun. But as these harmonies are numerous, and

as they have, in conjunction with those of the sun, the greatest influence on our globe, we shall describe the two together, immediately after giving a sketch of the other planets and their satellites, along with a few observations on the stars.

Solar Harmonies of Mars.

MARS is the next planet to the earth, and is about forty-seven millions of leagues distant from the sun. His diameter is about half that of the earth; that is 1490 leagues, so that his size, as a sphere, is about one-fifth part of that of the earth. His day is twenty-four hours, thirty-nine minutes, and twenty-one seconds; his year, or revolution around the sun, lasts during one of our years, three hundred and twenty-one days, twenty-two hours, eighteen minutes, and twenty-seven seconds. His equator has an inclination to his orbit of twenty-eight degrees, forty-two minutes, which gives him a torrid zone of fifty-seven degrees, twenty-four minutes. His annual circle is the most eccentric of all those described by the planets; so that, when seen from the earth, he appears sometimes very large and at other times very small. Although farther from the sun than we are, he has no moon, but is surrounded by a much more considerable atmosphere. A fixed star, after being eclipsed by him, does not recover the brightness of its light until it is at a distance from Mars of two-thirds of its diameter; a circumstance which has given rise to the supposition that the atmosphere of this planet refracts

light, and that it is of a far greater height than our own. Such an atmosphere must, in all probability, cause a considerable increase of solar heat by assembling a great quantity of its rays, and performing, as we have just remarked, the function of a great spherical *lens* around it. The sun must consequently appear on the horizon of Mars long before he rises, and remain visible long after he has set. His diameter is probably considerably augmented there by refraction, the clouds raised by his heat ascending to a much greater height than in our globe, on which three, four, or five miles are their customary elevation. If we can put confidence in our instruments, the clouds of Mars must form, in his vast atmosphere, aerial prospects of vast extent; the solar rays must be reflected there in a thousand ways; the sound of the echoes and the noise of thunder must be great beyond our conception. It is perhaps to these rich reflections of light that Mars owes that characteristic hue which distinguishes him from other planets: though it is at the same time very possible that this effect may be produced by the colour of a ferruginous soil.

Another thing very remarkable in Mars is the dark belt which sometimes covers one of his hemispheres; this was the case both in 1704 and 1717, with the difference that in 1717 it was more distant from his equator, and more approxi-

mated to his south pole. In 1719, from 17th May until the month of November, when summer began at that pole of Mars which, relatively to us, is his south pole, the splendour of his belt was very remarkable, while that of his opposite hemisphere, which had formerly been equally brilliant, now disappeared entirely. It would be difficult to explain such variations by supposing, as some astronomers do, that considerable shocks and changes have been produced there by convulsions, similar to our earthquakes. It seems to me more natural to suppose that the hemispheres of Mars are covered in winter, like those of the earth, with snow, which renders them resplendent at the time the sun shines on them, and leaves them in their natural darkness when melted by the warmth of summer. The case is probably the same in regard to the appearance of our globe, the continental parts of which must seem, to the inhabitants of the other planets, at one time brilliant, from the snow that covers them, and at another dark or dusty according to our seasons. In Mars there are, no doubt, seas, the vapours of which produce alternately those effects by their freezing and melting.

In addition to the belt passing in Mars from one hemisphere to another, which is at one time oval and at another time angular, there are two temporary spots near his poles of considerable

brightness; one of these only is seen at a time, as they are by turns resplendent in winter and dark in summer. It follows, that this planet appears sometimes scalloped at one extremity, one of his poles disappearing entirely. The poles of our globe, on the contrary, must always be apparent, and preserve its round appearance, because the ice is never entirely melted there. The poles of Mars have the sun elevated, during their summer, five degrees more above their horizon. They see him revolve during nearly a year, and as their atmosphere is of much greater extent than ours, they probably receive from it more heat than we do, notwithstanding their greater distance, and thus in all probability see the whole of their icy accumulations melted before the return of winter. On the other hand, when the sun appears at the opposite pole, where the ice has had time to accumulate during a winter and season of darkness of 343 of our days, that hemisphere casts a very bright light by the reflection of its ice, and the refraction of its dark atmosphere. The consequence is, that when Mars is at the same time in his perigæon and perihelion, his disk being dark at one pole and very bright at the other, he sometimes looks like the irregular disk of a comet. Were a calculator to guess the size of the inhabitants of this planet from its diameter, he would put them down as consider-

ably our inferiors in stature; but it may be argued, on the other hand, that, inasmuch as in our globe the size of men is not proportioned to the extent of the regions which they inhabit, the size of the rational inhabitants of all the planets is probably the same. Mars is, no doubt, smaller than our globe, but the proportion of habitable surface is probably not so much less as might at first be imagined, because his frozen zones seem to be relieved every year completely of their ice. If the degree of heat in Mars be smaller, its duration is longer, and it is, of course, probable that, in regard to the ripening of fruits and growth of animals, the proportions are very different from those which exist on our earth. His diameter is only the half of ours, while the length of his year is nearly double. An inhabitant of Mars, placed near one of his poles during the six months that it seems to be free from ice, might have an opportunity of observing phenomena which no eye can flatter itself with seeing in this globe, covered as our poles are, all the year through, with glaciers to the extent of many hundred leagues. If there be any similarity between their seasons and ours, a spectator, in the situation I have supposed, must have before his eyes extensive tracts, which have lately been receptacles for the waters of the sea. When, in winter, the currents of the opposite pole cover

the strands lately left dry with waves, which the cold afterwards crystallizes, and which the vapours accumulate into lofty pyramids of snow; we may suppose a crowd of animals to rush towards these frozen regions, not for the purpose of finding there a nourishment which the earth refuses them, but to collect that which the sea spreads along its shores. It is towards the poles that the fragments and dissolutions of various products are carried. It is by the attraction of such alluvial deposits that I am disposed to account for the instinct which leads the white bear and the foxes of Europe to frequent the barren coast of Nova Zembla; and sea-lions, whales, penguins, and a multitude of sea-birds to approach the islands in the direction of our poles. What could these animals find on the land, desolate as it is and covered with perpetual snow, did not the currents, originating in the opposite pole, bring, during summer, on their shores, even the trees of distant lands. This was experienced by the Dutch seamen, who passed a winter at Nova Zembla, in the seventy-sixth degree of north latitude. These instincts of the white bears and arctic foxes appear additional proofs of the periodical polar meltings which maintain such a correspondence between one extremity of the globe and another, by occasioning currents and a flux and reflux of the sea.

This planet, according to a long established belief among the ancients, is productive of conflicts in the field ; but our imagination may consider this sinister influence as qualified by that of the star of love, which revolves at a similar distance from us, and in a more auspicious position.

Solar Harmonies of Jupiter.

AFTER Mars comes Jupiter, the largest of all the planets. He is computed to be 1,300 times as large as the earth, and his mean distance from the sun is calculated at 163,700,000 leagues. He turns on his own axis in nine hours and fifty-six minutes; his annual course is eleven years, three hundred and fifteen days, eight hours, and fifty-eight minutes. His colour approaches to azure, and, like Mars, he has belts that are sometimes brilliant, at other times dark; they are parallel to his equator, and two dark belts are generally observed at a time. His southern belt appears every six years, and brings with it a dark spot on his northern edge. These variations were observed in the months of September, in the years 1665, 1677, 1713, and in the months of April, 1672, and 1708. But what is still more remarkable is his being apparently flattened at his poles, in so perceptible a manner that his axis is shorter by an eighteenth part than his greatest diameter. From these appearances astronomers have concluded that his dark belts were formed by clouds rising on his surface, and have ascribed the flattening of his poles to his centrifugal force; but we shall endeavour to account for it in a different way. Did the dark

belts of Jupiter consist only of fluids, I should imagine that they would neither be so constant, nor of such extent. They would not be directed in a line parallel to his equator, because, consisting only of vapours, they would naturally be the sport of winds. Now winds, whatever the advocates of attraction may say, depend, in some measure, on the atmosphere of the poles, which moves incessantly towards the equator, where the air is always dilated by the action of the sun. Besides, we have already shown that clouds, when lighted by the sun, are resplendent.

Next, as to the flattening of the poles in Jupiter.—I cannot consider this as arising from the effect of centrifugal force, because that cause would naturally produce a similar effect on the other planets, and especially on the sun, who is the focus of that kind of force. My notion is that Jupiter, being in what may be called the frozen zone of the solar system, and being covered with ice throughout all his circumference, (with the exception of the poles,) his seas and continents extend, not, as with us, from one pole to another, but in zones from east to west. The variable belts which appear between his shining belts are, in my opinion, vast tracts of solid land, which are resplendent at the time that the winter of their hemisphere has covered them with snow, and which lose their lustre in summer when that

snow is melted. In fact, these dark belts are observed to undergo variation once in six years, that is, during every half of Jupiter's year ; and they pass, like his summers, from one hemisphere to the other. As to the flattening of his poles, it seems to me merely an optical illusion ; for if his poles are covered neither with frost nor with water in a liquid state, they must be devoid of the reflection of light, and, consequently, hid from our view, so as to make his sphere appear flattened at its two ends. It is thus that Mars appears indented at one of his poles, when the summer melts the ice which had rendered it visible.

I am now led to notice a remarkable instance of the arrangements of Providence in the case of Jupiter. The inclination of the equators of planets to their orbits undergoes progressive diminution, in proportion as these planets are distant from the sun ; in order that the action of the sun may become less the nearer they draw to him, and greater in proportion to their increase of distance. The more extensive their torrid zone, the less is the solar action upon it, and the narrower it is, the more powerful that action. Nature has placed continents in the torrid zones of the planets, and removed the seas to a distance from them. In Jupiter she seems to have mixed them with the land in the following order ; she

has put a belt of continent under the equator along with two collateral belts of water, the vapours of which cover the middle belt in winter with cold fogs, which give it a white appearance. Each belt of water seems followed by a belt of land, and afterwards by another belt of water. Although these aquatic zones are thus separated from each other by alternate zones of land, I am inclined to think that they communicate with each other by narrow passages from the equator to the poles, and that they have the effect of moderating the atmosphere of the latter. The circulation of the sea is the *primum mobile* of the temperature of globes, being to planets what blood is to the human body; proceeding from the heart to warm the extremities, and returning from the extremities to refresh the heart. The mere evaporation of the sea by means of the sun is sufficient to establish the circulation of water in each hemisphere, in the same way as the perspiration of living bodies seems conducive to the circulation of the blood. In Jupiter, the length of night being only five hours in his torrid zone, his disk may be supposed to lose very little of its warmth during the absence of the sun. It is, no doubt, for a contrary reason, that Nature has given to Venus a night twenty-five times as long as ours. Besides, if it be true that our cannon balls acquire warmth by traversing the

air; and even that balls of lead thrown from slings are apt, as some of the ancients pretended, to melt, there seems reason to imagine that the quickness of the rotatory motion of Jupiter on his axis may augment his heat, under the notion that his disk must strike in some measure against his atmosphere. The quickness of this motion in Jupiter is so great as to augment to 9335 leagues an hour, while in the case of our globe it is only 358 leagues; and in the case of Venus only fourteen leagues an hour. But perhaps this imagined friction with the atmosphere does not take place, and Jupiter may roll his atmosphere tranquilly round, notwithstanding the notions of Dr. Halley, who, when treating of our globe, attributes the motion of our atmosphere from east to west to the rotation of the earth on its axis, and finds in this explanation a method of accounting for the existence of the trade winds. Agreeably to his hypothesis, the winds under the equator of Jupiter ought to be of extraordinary violence, while in Venus there could hardly be breezes of any kind, although her torrid zone is sufficiently exposed to solar heat to require a refreshing gale. Were Dr. Halley's notion correct, the trade-winds in Jupiter would be twenty-six times as strong as those of our torrid zone, impetuous as the latter frequently are; and, what is still more remark-

able, our torrid zone would have no calms, the contrary of which is abundantly known to our mariners.

Let us leave, however, for the present, these comparatively petty considerations which regard our terrestrial system, and endeavour to study the laws of the planets. Nature has called into action other powers than those of attraction and centrifugal force: it is not a force of that description which has regulated the station of the planets in the firmament; nor is it that which makes the planets revolve on their own axes, at one time slowly, at another rapidly, whatever may be the degree of their rapidity in their orbit; finally, it is not these powers which have given satellites to those which are distant from the sun, and refused them to those in its neighbourhood:—it is Providence, which has instituted and arranged these admirable harmonies by laws unknown to us, but of which the effects may be easily perceived. The earth being at a distance of more than thirty-four millions of leagues from the sun, Nature has given her a moon of half her diameter to reverberate on her the solar rays. Jupiter, being five times as remote, has four such moons, each of the entire diameter of the earth.*

* The first of these satellites is at the distance of 88,000 leagues from Jupiter, and turns round him in one day, eighteen hours, and twenty-eight minutes: the second, at the distance

These four moons, or satellites, a name given because they invariably accompany the larger planet, were discovered at the beginning of the seventeenth century, by the celebrated and unfortunate Galileo. He was imprisoned by the inquisition at Rome, for insisting that the earth moved round the sun. These satellites, and particularly the fourth, when turned towards the earth, strike our eyes, on looking at them through a telescope, as covered with dark spots, which have the effect of diminishing their apparent size, so that the fourth satellite sometimes disappears entirely. Some persons suppose that they turn round on their own axes, and that it is in the course of this rotatory movement that they show those dark spots which suddenly diminish their diameter. I am inclined, however, to think that they do not turn on their axes, that they perform the office of reflectors, and that the luminous foci of their mirrors are always directed towards Jupiter. In describing their orbits around him, these foci are sometimes turned towards us, at which time the satellites appear to us in all

of 140,000 leagues, turns round him in three days, thirteen hours, seventeen minutes ; the third, distant 223,000 leagues, revolves round him in seven days, three hours, fifty-nine minutes ; while the fourth, at the distance of 394,000 leagues, requires for its revolution sixteen days, eighteen hours, and five minutes.

their magnitude; while at other times the foci being not so turned, and showing themselves only obliquely, the satellites disappear in part, and sometimes entirely. We shall see that these reflectors exist in our moon, when we come to examine the shape of her mountains. The moon, whatever astronomers may say, does not seem to me to revolve on her axis, as she has always the same face towards us. The planets of the first order, performing, as they do, their revolution around the sun, must necessarily have a rotatory motion that they may enlighten all their circumference with his rays; but planets of the second order, or satellites, which perform their revolution around a principal planet, are evidently appointed for the purpose of transmitting to that planet the rays of the sun by means of reflectors, whose foci would be subject to perpetual derangement if they had a rotatory motion. It is certain that this motion has never yet been ascertained to exist in any of the satellites.

Jupiter's summer being to all appearance of the duration of six years in each hemisphere, the communication between one part and another of his immense circumference is probably not difficult. His circumference is ten times that of our earth, and his proportion of favourable weather, if we may venture to reason from analogy, is still greater. It would be mere fancy to conceive

that the size of the inhabitants of this planet must be greater than elsewhere, in consequence of its wonderful magnitude, as the different modification of seasons seems to enable them to pass from one zone to another, with the same ease as we experience in our globe. Fenelon was accustomed to say that our days are long and our years short. The contrary seems applicable in the case of Jupiter ; for were we to apply to its inhabitants our own rules of calculating the day by a revolution round his axis, and his year by the time required for his revolution round the sun, we should find his days very short and his years very long. Were we to suppose for the sake of speculation, that the inhabitants of this planet are of the same length of life as ourselves, we might calculate their boyhood as beginning after one solar revolution, their youth after two, their middle age after four, and their old age after six. His oldest trees, were the laws of vegetation the same as with us, would have but few concentric rings ; but his vegetable products could hardly fail to acquire a surprising growth in an uninterrupted summer of six years.

It would be idle to speculate on analogies in a case where there is reason to think that the difference of solar and lunar periods must produce a very decisive difference from our planet, in regard to the production both of vegetables and

animals. The sun must light the two poles of Jupiter together, since he never descends more than three degrees below the equator of that planet. It deserves to be remarked that this is nearly the term of the refraction of his rays in our frozen zone. A perpetual morn seems thus to enlighten Jupiter, and to be combined with the gentler lustre of the light and heat reflected from the sun by four moons of the size of the earth. We may speculate on his vast tracts of continent being crowned, in his torrid zone, with rich fruit-trees; and in his temperate zone with forests, and immense ranges of the smaller vegetable products. The vast seas which surround his continents like rings, and which give him his azure colour, may be considered to offer to his inhabitants the means of easy and extensive navigation. A speculator on national character would consequently be disposed to assign to the occupants of his soil the traits of national character common among the maritime nations of Europe.

Solar Harmonies of Saturn.

SATURN, though not so large as Jupiter, is a thousand times larger than the earth. His diameter is 28,600 leagues; his mean distance from the sun 300,500,000 leagues; his annual revolution round the sun is performed in twenty-nine years, one hundred and sixty-four days, seven hours, twenty-one minutes; his daily revolution on his own axis is performed, as Herschell has lately discovered, in ten hours and twelve minutes. His inclination on his orbit is not yet ascertained; it has been supposed, but without any certainty, to be thirty degrees. We should be inclined to imagine the heat of the sun feeble at so considerable a distance, but we have been enabled to observe on his two hemispheres varying belts similar to those of Jupiter, the existence of which sufficiently proves the alternation of summer and winter. In fact, Nature has multiplied his reflectors by giving him seven satellites, all as large as the earth.* Of these seven satellites,

* The first satellite, that is the one nearest to Saturn, is at a distance of 42,900 leagues
 The second, distant 55,000 leagues
 The third, distant 68,000 leagues
 The fourth, distant 88,900 leagues
 The fifth, distant 123,800 leagues
 The sixth, distant 286,000 leagues
 The seventh, distant 829,000 leagues

and turns round him in	{	0 ^d	22 ^h	40'	44''
		1	8	40	44
		1	21	18	0
		2	17	44	0
		7	3	0	0
		15	22	0	0
		79	22	0	0

The two first were lately discovered by Herschell; Huy-

or moons, as we may call them, the nearest must appear to Saturn eight times as broad as our moon appears to us; that is, with a surface sixty-four times as extensive. But the most singular circumstance in regard to this planet is the ring which surrounds him, and which was discovered two hundred years ago by Galileo. That celebrated philosopher first took its two luminous extremities for two satellites, and was much surprised at not seeing them two years afterwards. It was not until 1655 that Huygens discovered that Saturn had around his equator a ring thin and level, supporting itself around his disk, like a bridge without a foundation, or rather like an horizon around an artificial globe. From Saturn's disk to the interior circumference of his ring there are 9534 leagues, and the breadth of the ring is equally great, so that its outward circumference is of no less than 299,808 leagues. This is not all, for the ring is double, that is, formed of two concentric rings. A notion of this had been suggested by a small circular shadow which divides it in the middle, but Herschell has lately reduced it to certainty, for he has observed a star

gens had perceived the fourth the first of any, and Cassini the others. They revolve in the plane of the equator of Saturn, and have an inclination of thirty degrees to his orbit, with the exception of the seventh, which has an inclination of fifteen degrees.

between the separation of the two rings, which served it, if I may be permitted so homely an expression, as a pair of spectacles. This ring, as I have already observed, is very thin, and when the equator of the planet is raised, more or less, above our visual ray, we see the ring obliquely, and perceive two brilliant handles, the inside of which is dark. But when the ring happens to be in the direction of our visual ray, it disappears entirely from us on account of its want of breadth. This phenomenon takes place once in fifteen years, or once in every half of Saturn's annual revolution; that is, at his equinox.

This ring produces the same effect around Saturn as a circle of petals around the disk of a flower. It transmits him the solar light for the purpose of favouring vegetation, and the chief difference seems to be that the ring in the planet produces this effect on both sides, for it warms two hemispheres, and very possibly the two together. When the ring is in the direction of our visual ray, which happens once in fifteen years, we are enabled to perceive in Saturn three dark belts, one on the midst of the equator, and the two others about forty-five degrees farther off; one in the southern hemisphere, and the other in the northern. All three were visible at one time in 1715. The astronomers suppose them to be produced by the shadow of Saturn's ring; but

how are we to suppose three shadows produced at once? In my opinion, the belt in the middle is a direct consequence of the sun's heat in melting the ice on the equator of Saturn, whose terrestrial zone seems of a dusky colour. This notion appears to be supported by similar appearances in the central part of Jupiter, who, be it remembered, has no ring. As to the upper and lower belts, they seem to me to be produced by the double reflection of the ring acting on the two sides at the same time. When inclined towards the sun, and lighted only on one side, the ring must cast its shadow out of the planet, as the distance is sufficiently great to admit of it. It would appear that the Divine Architect has regulated the extent of this shadow, (carried to forty-five degrees) by the proportion followed by the architects of our humble globe, who determine that of the perspective of their monuments under the same angle, and make the shadows equal to their height. Accordingly the distance of Saturn's ring from his globe is exactly equal to its breadth, which is sufficient to prevent its shadow from falling upon the planet. When the sun enlightens him at forty-five degrees and upwards, under a smaller angle, the shadow of the ring, which is thin, becomes diminished, and the round disk of Saturn escapes from it by re-entering on itself. Were the ring to cast its shadow

on a globe at so great a distance from the sun, it would appear white, and not dark, by an arch of ninety degrees. The same thing would happen there, as takes place on our earth when snow covers our land during winter; the shadows of bodies are white, and the parts enlightened by the sun are comparatively dark. These effects may frequently be remarked in trees covered with hoar frost, and exposed to the sun.

There seems consequently very little doubt that Saturn's ring transmits heat, and not shadows, to the globe around which it revolves. Modern philosophers, with plane mirrors multiplied, have collected enough of solar rays to kindle fire at the distance of more than two hundred paces; and subsequently, on exposing the bulb of a thermometer to the moon's rays, (no doubt with a northerly wind,) have pretended that the spirit of wine contained in it experienced no additional heat; but other experiments, made on the rapid evaporation of water when exposed to the moon's light, have led to a very different result. Besides, is it at all likely that the small mirrors of our naturalists should have the power of sending the solar rays with a portion of their heat to a distance more than a hundred times their diameter, and that celestial reflectors should be without effect? Saturn's ring, extending more than 9,500 leagues in diameter, must have a very strong

effect at a distance which is only equal to its breadth.

The southern sides of a mountain reflect the warmth of the solar rays sometimes along the whole of its horizon. Has Nature less sagacity than our philosophers, or shall we suppose that, like them, she sometimes makes experiments without success? What purpose could be served by those numerous moons, and that wondrous ring, were they to transmit only light without heat to a planet in a congealed state? Although Saturn's horizontal ring be thin, it is not quite smooth on its surface, as originally supposed. Herschell has discovered shadows on it, and it was indeed by means of them that he ascertained that it turned round Saturn, and in the plane of his equator, in ten hours, eighteen minutes; that is, in somewhat less time than Jupiter takes to turn on his axis, and somewhat more than Saturn requires for the same operation; the rotation of the latter being performed in ten hours, twelve minutes. From the existence of these shadows, I am induced to conclude that the ring has mountains; and from the shining light which they transmit, I imagine that they are stationed and shaped like reflectors, as we shall see in speaking of the mountains in the moon.

I think, moreover, that this ring not only casts its shadow out of Saturn when the sun enlightens

it above or below, but that it casts no shadow on the planet even when enlightened horizontally. I suppose that the two belts are not altogether in the same plane, that the outward one is somewhat higher than the inward, and that it is this elevation that produces the small circular shadow which we perceive in the middle of the ring. By means of this difference of level the solar rays pass horizontally between the two belts, and convey light to the equator of Saturn in the same way as the visual ray of Herschell passed there obliquely, and perceived a star. Moreover, the solar light must diverge and be refracted in its passage by the mountains of the two belts disposed as reflectors, which may have their innerlimb much thinner than the outward one. Nature has certainly not acted with less intelligence in the construction of planets than in that of flowers, in which we have seen that she employs so sublime and so varied a geometry. Saturn's double ring probably cost her no more labour than the double row of petals of a daisy: both serve the same purpose, namely, that of concentrating the solar rays on their disk. Nature, which seems to have modelled most flowers on the shape of the orb of day, by giving them a small hemisphere at their centre and radii around, appears to have modelled Saturn with his ring and his moons on the plane of the sun, combined with the whole planetary

system. As the sun has an atmosphere of light and seven planets, the last of which, the Georgium Sidus, is twice as far from him as Saturn; Saturn has in like manner a luminous ring and seven satellites, the last of which is twice as far off as the sixth. Harmonies of so wondrous a character are certainly not to be accounted for by mere attraction. The satellites of Saturn, though nearly equal in diameter, are at very different degrees of distance from him, and these distances appear to be in proportions similar to those of the planets from the sun, although the latter are of very different sizes. Nature seems to have compensated Saturn for his great distance from the sun by giving him in his moons an idea of our planets, most of which must be invisible to him; but particularly by giving him through the medium of his ring a portion of the blessings of the solar rays. She seems to have united, in what may be called the frozen zone of the firmament, all the reflections of the orb of light by means of rings and moons, in the same way as she has repeated these reflections in our frozen zone by means of parhelia and auroræ boreales.

But the most brilliant effects produced in our world are not fit to be compared with the days and the nights of Saturn. If the sun enlightens each of our poles during six months, he warms successively those of Saturn during fifteen years.

So long-continued an influence, feeble as it may be, must give to vegetable products in this planet a growth greatly superior to that which our short summers can produce; but nothing, I should imagine, can be supposed equal to the magnificence of the nights in that planet. When its inhabitants are immersed in darkness, a double luminous ring of more than 9,500 leagues of breadth appears on their horizon. They behold it on a grand scale, for its distance is not greater than its size, and is most favourable for the observation of an object in all its parts; moreover, this ring has an inclination of thirty degrees towards them. Even in night, they probably distinguish it as easily as a navigator approaching the shore of an island perceives its hills, its rivers, and its distant mountains enlightened by the sun. The inhabitants of Saturn may thus be supposed to have an opportunity of contemplating, out of their own globe, new seas, vast continents, long chains of mountains, and all the topography of a great planetary body. What can be supposed equal to the beauty of this superb horizon, whose mountains and waters transmit them gleams of light from all directions. Seven moons roll around their planet in splendour and majesty. The nearest, though distant 42,000 leagues, looks to them seven times larger than our moon appears to us, for it is of the

diameter of the earth; the others gradually diminish in size until the last, which, being at the extraordinary distance of more than 800,000 leagues, seems only half the size of our moon, but forms, along with the others, a delightful prospect in the firmament. When the rays of the distant sun kindle the atmosphere of these magnificent reflectors, a thousand luminous scenes must strike the eyes of the inhabitants of Saturn. Their gratification must be incomparably greater than any that we can derive from the contemplation of the finest landscape. The variety afforded by a prospect such as we have described recalls to us the pleasure which we experience on passing successively from one beautiful object to another, when present enjoyment is heightened by still more delightful expectation.

The magnificence of such scenes as these which we suppose to fall under the eyes of the inhabitants of Saturn is increased by the circumstance that these planetary bodies do not present insulated or monotonous points of view to the spectator. The double ring, with all its continents, its seas, its mountains, its islands, and its rivers, must, if any faith is to be put in our means of observation, pass under their eyes in rapid succession. Imagine the delight with which a person unaccustomed to the wonders of distant countries would read a relation of an interesting

voyage to the islands in the South Sea, and who, in the course of a few days, would run over descriptions of a great part of the world. The inhabitants of Saturn may be supposed to discern, on the two faces of the ring, traces of the operations of Nature similar to those which exist on the two hemispheres of our globe, but of which the human eye can take in only a few objects at a time. The aid of such a telescope as that of Herschell might enable them to distinguish, in regions comparatively so near, seas, lakes, mountains, and perhaps objects of less magnitude. The circumference of our globe, which has already been so frequently circumnavigated, is not very different in extent from the distance between their globe and their ring. To the circular movement of the ring is to be joined that of the seven moons, which perform their respective circles in the heavens with different degrees of rapidity. By an admirable arrangement of Providence these moons do not revolve in the same plane according to the pretended laws of attraction, but their respective orbits are more or less inclined to the equator of Saturn, so that they are eclipsed only in their nodes, that is, in the points where their orbits cross each other. How graceful must be the motion of those queens of the night around the globe which they enlighten and fertilize.

If the night in this wonderful planet is so beautiful, the day is probably little inferior to it. The light, composed of the silver reflections of so many planets and of the gilded rays of the sun, may be similar to that which that orb scatters in our forests through the foliage of trees, while some of his rays penetrate and shine on the mossy trunks near the bosom of waters. The globe of Saturn, divided into zones of land and sea like that of Jupiter, seems not to have mountains of such a height as to impede, by the extent of their shadows, the operation of a horizontal light. This notion seems supported by the circumstance that Saturn throws out much less splendour than his moons. If God has given to the occupants of Saturn, situated as they are at the extremity of our universe, an image of our system in the secondary planets which surround them, may we not conclude that he has presented a still finer prospect to the inhabitants of the sun, placed as it is in the centre of the universe, and in a situation capable of beholding the whole? The sun is the source of life and light, and its inhabitants have probably enjoyments of which we feeble mortals, scattered in different globes, can form no conception.

Solar Harmonics of the Georgium Sidus.

“WERE we even to suppose,” says Voltaire, in his *Elements of the Philosophy of Newton*, “another planet than Saturn, and one which should revolve around the sun at the distance, let us say, of six hundred millions of leagues from the grand centre of the universe, of what use would be the light and heat of the sun at a distance where he would appear no larger to the planet in question than Jupiter or Venus appear to us? I have thought it necessary to suppose so great a distance as six hundred millions of leagues, because, were it less, the planets might be in danger of attracting and embarrassing each other by their reciprocal gravitation.”

To the praise of Voltaire or of Newton, or at least of the system of gravitation, Herschell has discovered a new planet at the distance of 600,200,000 leagues from the sun. He called it, in compliment to his sovereign, *Georgium Sidus*; other astronomers have named it *Uranus*, but most have given it the name of *Herschell*, and with great propriety. Every man ought to reap the fruit of his labour, and the name of a philosopher is, in my opinion, more worthy of being remembered than that of a king, or of a fictitious demi-god.

This planet, though placed at such an immense distance from the sun, participates doubtless in his light and warmth; for Nature has made nothing in vain. If it be surrounded, as is probable, by an immense atmosphere, there seems little doubt that the sun appears much larger to its inhabitants than Jupiter or Venus. The extent of the *Georgium Sidus* is computed at 12,760 leagues in diameter; that is, it has a surface about eighteen times as great as that of the earth, and the whole planet is about eighty times as large. It describes its orbit around the sun in eighty-three years, fifty-two days, four hours, and ten minutes: the time required for its diurnal revolution is not yet known. Herschell has observed a great flattening on its poles, perhaps because they cease to be visible in consequence of having no icy covering, and of not being luminous.*

* Herschell has discovered six satellites to this planet, of which the first and nearest performs its revolution in 5^d 21^h 25' 0"

The second in..... 8 17 1 19

The third in..... 10 23 4 0

The fourth in..... 13 11 5 1

The fifth, situated at double the distance of the fourth, in..... 38 1 49 0

The sixth, at four times the distance of the fifth, in..... 107 16 40 0

The above distances are not marked in the French pub-

The distance of the planets from the sun is proved by the size of the angles under which they behold him, and in return the size of the angles is proved by the distances of the planets. Supposing even the sun not to appear larger on the horizon of the *Georgium Sidus* than Venus does on ours, heat may still be communicated by his rays to the atmosphere of the new planet, in the way that a spark may be made to kindle a flame by means of air. His electric influence is probably great in that planet, since his reflected rays are still strong enough to return from it towards the earth, and to be perceptible by our telescopes. The inhabitants of the *Georgium Sidus*, placed at the extremity of the solar system, do not, in all probability, see the other planets ; but it does not seem impossible that they may see those of a neighbouring system, and the sun which enlightens it. Perhaps the seasons of this planet are discriminated by the influence of a foreign sun ; a vast atmosphere may refract them on its horizon and increase their effect ; or, it may have

lication called *Connaissance des Temps*, where I must confess that there seems a good deal of intentional obscurity and hesitation in regard to the discoveries of this great man. Be this as it may, Herschell supposes his planet to have a double ring for the purpose of lighting him, in the same way as Saturn ; and another astronomer has lately discovered two new satellites.

various means of receiving warmth which are wholly unknown to us. Perhaps tracts of continents run in the *Georgium Sidus* in circular zones parallel to its equator, and mixed with maritime zones, as we have supposed in the case of Jupiter and Saturn: his surface, particularly towards the pole, instead of being elevated into lofty mountains like those of Mercury and Venus, planets adjacent to the sun, or arranged in gentle slopes like those of Jupiter and Saturn, may be hollowed on a smooth plain into valleys which reverberate the solar rays. These suppositions are suggested by the course which I understand to be adopted by the Chinese, who, under the climate of Peking, where the rivers are frozen every year for six weeks, are said to construct hot-beds in the form of ditches, in which they cultivate early herbs and fruits during winter without the aid of fire. The Author of Nature has placed models of these hot valleys in the bosom of the frozen zone, in the same way as he has placed frozen mountains in the midst of the torrid zone. Perhaps the moss and lichens which decorate our snowy tracks with verdure, purple, and flowers, rise in the *Georgium Sidus* to the height of trees, in the course of a winter of forty-two years. If the fern of all climates attains in the torrid zone the height of the palm-tree, and if mosses hang like drapery from the boughs of

the fir in our frozen zone, a poet might give a range to his imagination in regard to the magnitude and beauty of these products in the newly discovered planet. He might suppose the lichens which cover our rocks like a carpet, and the seeds of which come to maturity notwithstanding the bleak winds of the north, to offer in that planet an asylum to birds in their beautiful hollows. The fishes of our northern seas may abound there, and attain a much greater size.

The vast distance of the Georgium Sidus from the sun leads the mind to dwell on a comparison between it and the icy regions of our globe.—Nature may have given its inhabitants an animal of the rein-deer kind, feeding on moss and combining in itself the advantages of the fleece of the sheep, the milk of the cow, the strength of the horse, and the lightness of the stag. They have, doubtless, the faithful dog, which attaches himself in all situations to the lot of man, even when least fortunate, and which is found wandering with the Patagonians on the desolate shores of Cape Horn. Let us be assured that Nature has not abandoned an entire planet to the rigour of winter, or the intemperance of the elements. If ice covers a great part of the Georgium Sidus, if volcanoes cast forth a devouring element, we may be assured that Providence has counterbalanced these drawbacks by

mitigations of their destructive power, and by advantages of which our situation in this globe does not afford us the means of judging. An exclusion from the direct rays of the sun during so long a period as forty-two years may be compensated by the brightness of the satellites attached to this planet, and by the reflection of light and heat in a variety of ways. A poet may compare their situation to that of the Hyperboreans, to whom the Greeks were in the habit of sending every year presents from the Island of Delos, as a homage to their innocent mode of life. He may imagine them to have traits of resemblance with the poor and honest Finlanders, among whom I found many marks of philanthropic virtues and of hospitable manners. That remote and primitive race may be said, like the Laplanders, to have preserved their innocence in the infancy of reason; to be strangers to calumny, and to the mad ambition of shedding blood for the sake of political aggrandizement. With such dispositions, a solitary tribe may be happy around the same hearth, with their dogs and rein-deer, or in grottoes carpeted with moss, where the family seat themselves together, and express their mutual affection in songs. How much better is this than to look for a gratification of their pride in ostentatious monuments, or to afford the historian materials for the delineation of human crimes by

their folly and misfortune. A simple and unperverted society, united by the most tender ties, may live long in tranquillity, and may die in peace: they do not honour a god made by human hands, but they adore the Author of Nature in Nature itself. And if, placed as they are in the extremity of the habitable globe, they could forget the impression excited by the works of Nature, they would find the belief of a Providence in the suggestions of their hearts, and the consciousness of their happiness.*

* Piazzi and Olbertz have lately discovered two new planets. Herschell calls them asteroids on account of their resemblance to small stars.

Solar Harmonies of the Planets.

ALTHOUGH I have given only a slight outline of the harmonies of the sun with the planets, it is easy to perceive that it is neither his centripetal nor his centrifugal force which has arranged them in the order in which they at present revolve. Were that the case, the larger would be either the nearest or the most remote; that is, they would be arranged around him in distances proportioned to their diameter. Now this is by no means the case; for while Venus, though nearly of the same size as our planet, is nearer to the sun, Herschell is at a vastly greater distance, although nearly eighty times as large. It is in vain to attempt to account for this by a supposition of different degrees of density in the planets; they must be at least in the plane of the sun's equator; their orbits, on the other hand, are inclined to it on the same side, under different angles, so that these planets are eclipsed only in their nodes, that is, at the points where their orbits cross each other.* Without this

* The orbit of Mercury has an inclination of 14° 20' 0"	
That of Venus.....	10 43 20
—— the Earth.....	7 20 0
—— Mars.....	9 11 0
—— Jupiter.....	8 39 10
—— Saturn.....	9 50 20
—— Georgium Sidus.....	8 6 25

admirable arrangement, they would be frequently eclipsed, and the planets nearest the sun would deprive those at a distance of light. The case is very different in regard to the inclination of the orbits of the satellites in respect to their planets ; for all those of the same planet are on the same plane, and have a similar inclination to its equator.* As these secondary planets do not receive their light from their principal planets, but transmit them the solar light, they do not injure each other by being on the same plane ; they are placed like mirrors which all reverberate towards the same focus.

Attraction can certainly not be the principle of the motion of satellites, for its laws would appear at variance with the arrangement I have described. The inclinations of the orbits are varied in the planets relatively to the sun, while in the satellites they are equal, relatively to their respective planets, notwithstanding that the greatest differences exist in each in respect to the degree of distance. How can we conceive that planets, of which the masses and distances are so unequal, and the movements so regular, should obey no

* The orbits of the satellites of Jupiter have to the plane of his equator an inclination of..... $3^{\circ} 18'$ nearly.

Those of Saturn as well as his ring.... 30 0

Those of the Georgium Sidus..... 90 0

That of Saturn's seventh satellite only.. 15 0

other laws than those of attraction ? How can we imagine that it is exactly when they are nearest to the sun, and when he attracts them to him with the greatest power, that they should go away from him with the greatest rapidity ? How contradictory must be the operations of this centripetal power ? What more could be done by centrifugal power itself ? How can we conceive that the first is to be changed all at once into the second, exactly when it has attained its greatest height ? How could such a theory ever be applied to comets, the appearance of which has been so often predicted in vain ? As soon would I believe that a vessel in full sail on the ocean is attracted by a centripetal force to India, and is repelled to Europe at the moment when it is on the point of making shipwreck on the shore.

I am disposed to allow that attraction exists in all parts of matter, that it proceeds from the sun, and that it draws towards it whatever floats in the immense ocean of his rays. I conceive these effects in the way that I conceive those of the general current of the sea, which, proceeding from one of the poles of the earth, propels towards the equator all the substances floating on its surface, and brings them back towards the same pole by lateral counter currents. But as there is in every vessel a pilot who directs its course, is there not an intelligent being to

guide the movement of the stars? Is there not a celestial pilot, who, in spite of the vicinity of kindred bodies which attract, and in spite of the prodigious force which precipitates, a planet towards the sun, directs the course of each around the sun in regular times and spaces? Whenever we examine the body of an animal on our globe, we find it under the guidance of that soul which possesses instinct and consciousness. Nay, even a simple shell is formed of calcareous materials disposed by concentric layers, and variegated on its surface with tubercles and little furrows like the surface of the earth. It is often covered with sea plants which vegetate there, and with little animals which inhabit them. It is similar to a petty world, and contains a living creature which moves in the ocean, and frequently undergoes great changes of situation in consequence of the periodical motion of the water of the sea. Our globe, wherever we examine it, is full of animated beings, whether we look to the air, water, earth, or even to the epidermis of a leaf. Should a *rotifer* (*vorticella rotatoria*), inert as a grain of dust, have a living principle which it may preserve from age to age, and should there be no living principle attached to any of the heavenly bodies? What! when during night I cast my eye upwards on the innumerable stars of the firmament, and when confounded in my insig-

nificance, my mind dwells on their incalculable distance, their immense magnitude, their perpetual duration, should I then believe that I who have given myself nothing, I whose life is so precarious, and who can do nothing but by the assistance of my fellow creatures, should I imagine that I alone possess an intelligent soul to the exclusion of the various objects which I behold? Can I possibly admit the idea that these immense bodies are the perpetual sports of a blind force which attracts them without being able to unite them, and repels them without being able to separate them? If one of the animalcula, with which the ocean is covered in the torrid zone, were capable of inferring that the vessel which sails during night through a host of his species were a dark and inanimate mass carried along by blind currents, he would reason less inconsistently than the astronomer who knows that myriads of souls are disseminated throughout that earth on which he treads, and who affirms that there exists not a soul in Heaven. Yet I am by no means surprised that, amidst a corrupt nation, there should be some men who refuse a soul to Nature at large, when they act in a manner so unworthy of the original purity of that which they have themselves received. But amidst those who have continued impressed with a due respect to Providence, we very seldom meet with any who have

not placed either a genius, an angel, or divinity, in each star. What navigator does not find hope revive in his breast when at night, in the midst of a tempest, he sees the bright orb of Venus appear on the waves? What unfortunate invalid does not experience consolation when, amidst the languor of sleepless hours, his humble dwelling is cheered by the rays of the new moon? I call on you, inhabitants of the icy zone, to bear witness to these celestial influences. I ask you if you do not experience a sentiment of devotion and delight when, in a night of several months, the dawn casts her rosy streaks on the snow of your regions? Hope and joy appear then to descend from Heaven along with light, and to bring consolation to unhappy mortals.

The planets are connected with each other by relations observed in the days of antiquity, but misapprehended by the moderns, who acknowledge no influence but that of attraction. A calculator might amuse himself with computing that the course of the planetary years appears to offer relations with the principal periods of human life, as if man, or a being similar to man, were the object of all the harmonies of which the sun is the primary mover. Mercury completes his revolution in the short period of three months, a time after which a child begins to enjoy the use of his eyes: after the lapse of seven or eight months,

making a year of Venus, a child knows his mother, and begins to smile to her, and at the expiration of a twelvemonth, he begins to walk and to feel the taste of fruit, his teeth being by that time of some use. After a revolution of Mars, that is, after the lapse of two years, a child makes progress in speaking; and after the expiration of the twelve years required for the motion of Jupiter around the sun, he may be considered as approaching the age of puberty. Saturn's thirty years correspond with our entrance on middle age, and the eighty-three years of the Georgium Sidus with our departure from this scene of existence.

Animal and vegetable products, the different kinds of which are limited to certain latitudes, are evidently subordinate to the influence of the sun, who may be called the primary mover of life in all departments of Nature. Like Apollo in the fable, he forms by means of his golden bow, composed of rays of light, innumerable harmonies of all that surrounds him; while the revolving planets may be called the chords of his lyre. I am led even to doubt whether it is likely that the orb of day should be covered with a complete sphere of light, and that his influence should be confined to a few planets in the plane of his equator? Is it not possible that his bril-

liant poles may convey heat to lateral orbs which are unknown to us?

Comets appear to roll round the sun on planes different from those of his planetary system. What wondrous stars, if stars indeed we can call these luminous and long-tailed bodies which cross the planes of the orbits of planets in all directions without deranging their course, and which employ ages to approach and to retire from the sun! Some of them appear nebulous, and formed of several nuclei similar to that floating ice which descends from our poles to the torrid zone. Others, observed by the sister of the celebrated Herschell, being transparent and perhaps unsusceptible of touch, appear to be accumulations of electric fire. Are we to suppose that Nature employs for the purpose of cooling the torrid zone of the solar sphere, and for warming its frozen zone, means similar to those which she employs in the zones of the terrestrial globe, I mean currents of a fluid alternately frozen and melted, warm and cold atmospheres, and floating ice? Can the immense ocean of light be supposed to have a flux and reflux like the ocean of our globe? Is it likely that the rays of the sun should expand themselves in vain in that infinite space where the planets are hardly perceptible? Is it probable that their vivifying materials, collected

with so much regularity by moons and planetary rings, and even by the petals of flowers, should be extinguished in the ethereal regions? Is it likely that the ray of light which proceeds from the sun, and comes in the short space of seven minutes and a half to our globe, should be lost for ever in the firmament at the time when it touches the horizon? A small rivulet flowing under the wheel of a mill which it causes to move, proves subsequently the means of irrigating meadows, and nourishes in its bosom a multitude of living beings. Not a single drop of its water is wasted, whether it be evaporated in the air, sunk in the earth, or absorbed by the river into which it falls.

From all these considerations, the conclusion is that the ocean of light, which vivifies every thing, may extend its animating power beyond the scattered planets which now roll at so vast a distance from each other? To confine it to these seems to me little else than to suppose an ocean confined to wash the shores of some floating islands, and unconnected with a continent of any extent? If a comparison may be made between limited beings and those which know no limits, I would advert to the circumstance that even a drop of water is replete with animalcula; while our seas appear, even in this climate, during a summer night, and in all seasons between the

tropics, sparkling with small luminous bodies which are apparently inspired with life. This life I consider to be directly or indirectly the result of solar influence. I cannot help thinking that I have witnessed, in our summer season, a similar phænomenon in particular situations of our atmosphere. When extended along the grass with my eyes fixed on the azure sky, I have often seen small white circles, some single, others double, with a dark centre, moving rapidly to right and left. I mention this however without warranting its accuracy, as it might possibly be an illusion of the sight. The inference from my perception, if accurate, would be that our atmosphere contains a mass of animalcula similar to those observed on the surface of the sea in the torrid zone; and why should not light, which gives them their colour, their fluidity, their motion, and their temperature, have not merely its globules but inhabitants of a texture approaching to its own? Newton, who so carefully analyzed the solar rays, never considered them in the light of a material substance; nor has any one viewed them as divisible and corruptible. They do not admit of being confined in vases like air or water; they traverse tempests without being diverted from their course. The orb which transmits them to us possesses, doubtless, a number of unknown properties which he communicates to the planets

of his system along with the rays of his light. The decomposition of his warmth is the means perhaps of giving a form to objects, while that of his attraction gives them their motion, in the same way that the rays of his light are the primary cause of their colours.

Solar Harmonies of the fixed Stars.

THE sun would appear to our eyes the god of the universe if there were no fixed stars ; but it is probable that, with all his attendant planets, he is not more than a luminous point in the immensity of creation. The fixed stars are at an incalculable distance from us, and, as far as we can judge, of wondrous size. The Georgium Sidus, although six hundred millions of leagues from our globe, is found to pass between us and them, so as to cause them to be eclipsed ; and Herschell's telescope, which magnifies in the surprising ratio of four thousand times, and enables us to discover the satellites of the Georgium Sidus, has the effect of diminishing the size of the fixed stars, and exhibits them to us only as a point, stripping them of their diverging light, and of their deceitful sparkling. That instrument hardly gives a diameter of a few seconds to the most brilliant of the fixed stars. It is agreeably to this small angle that Cassini computed the distance of the star called Sirius from the earth at 43,700 times the distance of the earth from the sun, and his diameter at thirty-three millions of leagues. Were this calculation correct, the globe of that immense star would be sufficient to fill the whole of the space between the earth and the sun, and the size

of Sirius would be beyond calculation greater than that of our sun. If the planets lighted by Sirius are, relatively to him, in the same proportions as those that roll round our sun, they must not only be in greater number, but infinitely larger than those of our system; the length of their orbits exceeding, in a manner, the powers of ordinary figures. Without attempting to enter into calculations on such imaginary subjects, it is apparent that the stars are placed at very great distances from each other, in order that ample space may be given to their planets to revolve round them. The Georgium Sidus, which scarcely perceives some of the planets of our system, may perhaps have a clearer view of those belonging to another sun.

It seems probable that each star has planets subject to its attraction; it is evident that this attraction does not exist between the stars themselves, and that consequently it is not a universal law of Nature. Though the stars are, in general, immoveable, several of them have, or seem to have, particular motions among each other; one of them describes a circle of two and a half degrees in diameter; and our sun, it is said, describes a circle by turning round on himself in twenty-five days. It deserves to be remarked that the light of some stars is subject to variation, increasing at one time and diminishing at another.

This period is of three days in the star called Algol; of five in one of Cepheus; of six in one of those which form the Lyre; of a hundred in one of those of Antinoüs; of sixty in one of those in Hercules; of three hundred and thirty-one in one of those of the Whale; of three hundred and ninety-four in the variable star of the Hydra; and of ninety-seven in that of the Swan. About a hundred and forty stars are said to have disappeared from observation entirely, and fabulous mythology records that one of the seven Pleiades vanished at the time of the destruction of Troy, being so much affected, says Ovid, with the fate of that unfortunate city, that she covered her face with her hands. On the other hand, new stars come under our observation from time to time. In 1572, one of the size of Venus was seen in Cassiopea, but it has not been observed since 1574. The star in the Whale is visible only during four months and a half, and re-appears at the expiration of eleven months; that in the Swan, at the end of thirteen months, and that of the Hydra at the end of two years; the latter continues to shine during four months. All these variations are accounted for by supposing that they have one side more luminous than the other; and that in their rotatory movement on their own axis, they show us sometimes the one, sometimes the other. Some persons imagine that light, that

heavenly element, is the life of the stars; that it forms an immense ocean in which the constellations are archipelagos, and the suns islands, bathed, if I may so say, by a perpetual flux and reflux of light. The wandering stars may perhaps be planets foreign to our sun, which are removed to a distance from the centre of their systems, and are apparent in our system when at that part of their orbit in which they are nearest to us. At the same time it is very possible that they may be fixed stars, subject to laws of which we have no conception. Were they however to have the power of attracting each other, the motion of one would derange all, and confusion would ensue in that heavenly vault which at present is so replete with harmony. In so great a number of stars some could not fail, in the course of mutual attraction, to be joined and amalgamated: were such the case, our telescopic observation would exhibit some of them at least as double, but it is so much otherwise that the stars which appear double to the eye, and have consequently been called so, are found to be separate on being examined by the telescope.

Yet the stars, vast as is their distance from each other, are evidently connected to a certain degree together: they are arranged on different planes, which extend into the depth of the firmament. The most conspicuous are called stars of

the first magnitude, while those which are almost too small to be perceived, are ranked so low as the seventh degree of magnitude. They appear to us to be grouped in a variety of ways; some on the same line, like those of Orion's belt, which shine with an equal degree of light; others form only a luminous group, like those of the Pleiades; others, still less distinct, form, in consequence of their immense numbers, white nebulæ, like those of Magellan, near the south pole, and particularly that long, white, and irregular belt which surrounds the firmament in its circumference. All those white and luminous spaces contain, or appear to contain, thousands of stars perceptible by the telescope.

The ancients divided these different regions of the heaven into constellations, and computed them to amount to sixty-three in all; but the Abbé de la Caille has added fourteen to the number, from his observations in the southern hemisphere, where he is said to have discovered no less than 9450 new stars. The ancients, after associating these constellations in a fanciful manner, gave them the names of figures, to which they have no resemblance. They gave the name of Ursa to seven stars, apparently near our pole, and which are just as like that animal as to king David's chariot, the name given to them by the common people in France. The Hindoos, equally absurd

in their astronomical views, consider the universe to be shaped as an egg, and look on the luminous belt that seems to divide it in two as a fracture made there by the evil being. The Greeks, attributing every thing to the divinities of their country, imagined, or rather professed to imagine, that it was the milk which Juno shed from her bosom in nursing Hercules. The Abbé de la Caille is, I believe, the first who gave names to constellations, derived from objects useful to man, such as the sculptor's shop, the chemical furnace, the pendulum, the graver, the compass, the telescope, &c. This idea was worthy of the virtuous intentions of that laborious astronomer; but it is very doubtful whether these names will every interest the public, or even the artist, who, it must be confessed, would be not a little puzzled to find in their figures any resemblance to their instruments. Would it not be better to give to constellations, and even to separate stars, the names of the benefactors of mankind? These would indeed be monuments, not liable to demolition by envy; they would shine before the eyes of nations, and might perhaps awaken in them sentiments of humanity, which would form a bond of union between mankind. What cold politician, or wanton egotist, would not feel a sentiment of beneficence on seeing the star of Confucius or of Fenelon shining on his roof?

There are still persons who imagine that we have each our star, which presides at our birth, and renders us happy or miserable during our whole existence. Without commenting on this curious notion, suffice it to say that this supposed influence of the stars might probably have the effect of improving their conduct if they were believed to preside over virtues. A nobler temple could not be raised by Nature to the qualities which dignify the heart of man. Their number is amply sufficient to take the names of all the individuals who, in ancient or modern history, have rendered themselves conspicuous as benefactors of mankind. Herschell says, that the number of stars is, or appears to be, so great, that to whatever portion of the heavens he directed his telescope, he found it covered with them in all directions. He counted a surprising number of them in the "milky way" in the short space of three quarters of an hour. Yet a modern astronomer, of the sect of materialists, gravely affirms that, after watching, during a quarter of an hour, the revolution of a zone, of two degrees of breadth, in what is called the thigh of Ophiuchus, he did not perceive a single one. Should we not rather account for this by the well-known fact that Atheists have not the gift of making discoveries of any kind. Light, says Plato, is the shadow of the Divinity; when we have ex-

tinguished the belief of God in our heart, it is time to lose the trace of his works in the heavens. Among the 'multitude of stars observed, as mentioned above, by Herschell, a number were grouped two and two, three and three, four and four, five and five, and even six and six. They are not on the same plane, but follow each other in succession as if placed in perspective: their distances from each other are incalculable; nay, an English philosopher has gone the length of saying that some of them are so remote that their light, although coming at the rate of four millions of leagues a minute, has not yet had time to reach our globe since the creation of the world. This allegation is clearly of the hyperbolical class; but, at the same time, it must be admitted that our imaginations can hardly go too far in forming conceptions of the immensity of Nature's works. Never let us flatter ourselves with the vain notion of being able to acquire an idea of the whole. However admirable may be innumerable suns, surrounded by their respective planetary systems, let us not imagine that the whole universe is filled with them, like a hive with combs, which touch each other's sides in the way imagined by Descartes with his *vortices*, and as indeed they appear to our superficial observation. The stars are probably only a part of the extent of creation; the works of God may contain other

materials, other laws, other combinations, and other results. It is not likely that the Author of Nature, who has created, with infinite intelligence, a multitude of organized beings in such a variety of different ways to people this comparatively small globe of earth, should have perpetually repeated the same idea in replenishing the firmament. Little can we conceive of the plans which regulate the universe, we insignificant beings, full of wants, who hold existence by a thread. In a future state we may be permitted to acquire some idea of the grandeur of his works; and death, like night, may open to us new means of observation in the starry expanse.

Some astronomers think proper to express an opinion that our sun constitutes a part of the constellation of Hercules; but the stars which appear with splendour like Sirius are evidently much larger than our sun. It would be hardly less absurd to suppose our sun one of the various stars which appear to us like grains of sand in the milky way, particularly as that assemblage surrounds us both at our zenith and at our nadir. Let us be assured that, in whatever part of the firmament we may be placed, we can perceive only some islands and archipelagos of the celestial ocean. We are at so great a distance from the nearest stars that our celestial navigation, although extending to 190 millions of leagues a-year,

makes no change in regard to their apparent position. Although our globe rolls with more swiftness than a cannon-ball, we can approach to no part of these wondrous orbs, so as to see them even in a different point of view. The revolutions of our thoughts, like those of our planet, always bring us back to our comparatively petty orbit. We know not who are the inhabitants of so many insulated worlds; but we may be assured that the Divine Architect has linked together all the portions of his admirable workmanship. Not only has he put a multitude of luminous globes, which do not move, in harmony with opaque globes, which move incessantly around the others to collect their light, but he has put them in some degree in relation with man. Our planetary system, which is more than 1500 millions of leagues in extent; the stars situated at incalculable distances; the milky way filled with thousands of stars; all the constellations extending from that of Ursa to that of Eridanus; all this immeasurable landscape comes forth in the hour of darkness, and is observed by the retina of an eye which has hardly a line of diameter. Oh! astonishing proof of the omnipotence of God! oh! infinite wisdom, I feel as if extinguished under the awfulness of thy wonders, and my mind sinks under the prodigies of thy power.

It may one day be given to us to take a more

accurate survey of these wonders. The position of the sun, in the centre of his system, has suggested to some the possibility that there may be there a region reserved for a renewal of our existence in a happier state. The imagination may figure to itself the command of magnificent prospects across that sphere of light which surrounds his orb; across that radiated atmosphere which, like a celestial telescope, may display the relation between his planets and the other suns, in the way that our comparatively small atmosphere collects on the earth the rays of the orb of day. It is only in the centre of our system that we can expect to obtain a comprehensive survey of its wonders. Nor does it seem unreasonable to imagine that the orb, which is the source of life and motion throughout this globe, should be the receptacle of its inhabitants in a future stage of existence; and that the souls of the good should look down on this lower world to confer aid on oppressed innocence. Perhaps it is permitted to them to have in their future state a clear view, and an uninterrupted enjoyment, of that Divinity whose will they were instrumental in executing upon earth. It is there, perhaps, that you live, benefactors of mankind, Confucius, Socrates, Plato, Marcus Aurelius, Epictetus, Fenelon, Rousseau, and others, whose knowledge and wisdom preside, like guardian angels,

over the destinies of nations. Your virtues, though unknown or imperfectly appreciated by man, did not escape the observation of the all-seeing eye.

But it is not given to blind mortals, who grovel in the dust, to carry their thoughts into this sphere of light. Its lustre would dazzle our understanding as it dazzles our eyes. As for me, like a caterpillar deprived of vision, and creeping along leaves shaken by the wind, I cast here and there some silken threads on the tomb where I bury the winter of my life; but when I shall be disengaged from my *crysalis*, and the wings of my soul expanded, as Plato conceived, by death, I hope to take my flight towards regions where an eternal spring prevails. I may then see at a distance that unhappy earth, which contains so many oppressors and so many victims. Still I shall delight to fix my eyes on the spots where I lived, solitary and happy, in the contemplation of Nature; where the rays of the morning, the verdure of meadows, the shade of forests, the consolation of friendship, and the charms of love, gave me the first proofs of the existence of the Divinity. May it be my lot to be instrumental in increasing the happiness of my fellow creatures on earth, and to bear a part in preparing them for the enjoyment of a future state!

Solar Harmonies of the Moon.

KEPLER, the restorer of astronomy, and the discoverer of the law of attraction, asserts positively that the moon has an atmosphere. In proof of this he refers to the central eclipses of the sun, during which we always see a luminous ring around the moon, which proceeds, in his opinion, from the atmosphere of a satellite. According to him, the apparent diameters of the sun and moon are nearly equal; that of the sun not surpassing that of the moon by more than a hundred and eightieth part. Gassendi, and some other astronomers, go the length of considering that of the moon the larger of the two; and in several central eclipses of the sun, observed in London, and described in the "Philosophical Transactions," there has always been seen a luminous ring somewhat wider than one of our fingers, which surrounded the limb of the moon, and was refracted on his disk so as hardly to appear darkened. Such, among others, was the total eclipse of the sun on the 1st of March, 1738, observed at Edinburgh by Maclaurin the celebrated mathematician. He says that, during the appearance of the ring, the light of the sun was all along very perceptible; and he adds that

many persons, both of good eyes and of veracity, assured him that, towards the middle of the annular appearance, that is, in the darkest part of the eclipse, they were unable to discern the moon on the sun. These expansive effects of the solar rays can be attributed only to their refraction in the lunar atmosphere.

The authorities which I have just quoted are, no doubt, great; but I apprehend that we ought to pay attention only to experience and reflection when engaged in the search of truth. The opponents of the idea of a lunar atmosphere bring forward, it is true, experiment against experiment; but I cannot help thinking that there is an inaccuracy in those that they have made. It is possible that the lunar atmosphere may not be higher than its mountains, which, as we shall see presently, are of surprising elevation. In that hypothesis, it will not affect the light of the stars over which it passes, as it will not go beyond its planet. It is likewise possible that in days of a fortnight's duration it may be greatly dilated, and consequently admit of little refraction in the hemisphere that looks towards us.

In the absence of astronomical proof let us resort to physical data, by way of ascertaining the existence of this atmosphere. Herschell has observed three volcanoes in the moon; and it seems to admit of little doubt that fire, at least

visible fire, cannot exist without air, nor volcanoes without water. Now in an inflamed body it is only the surrounding air that is consumed by fire. It is singular that naturalists demonstrate, on one side, that there is no fire without air; while, on another, astronomers maintain that there is no air in the moon where there are volcanoes. Scientific men ought to agree better together if they expect to make any progress of consequence.

Let us borrow from natural philosophy, as applied to our globe, such ideas as may enlighten us in regard to the natural philosophy of the heavens. Supposing it proved that the moon has an atmosphere to collect the rays of the sun, it will be no difficult matter to show that she is placed in the most proper manner to reflect these rays. Painters and opticians are aware that, if a spherical body be enlightened, it will contain one luminous point which casts a gradually diminishing shade on the rest of the body, and makes it appear round. In representing such light, it is common to express it by a white mass falling on the globe, and spreading itself with gradually diminishing strength on the rest of its hemisphere, so as to give it rotundity. This effect is perceptible on all the round fruits that hang on trees. We perceive there a streak of light which strikes on one point, and in all the rest we ob-

serve half tints, or rather half glimmerings, which give it a round appearance. This is very perceptible on the globe of the eye, although it be in a great measure white. The case is very different in regard to a number of flowers. We have shown in the "Studies of Nature" that flowers were reflectors, either converging or diverging, which convey the light of the sun to their sexual parts; they reflect it by their convex and concave petals, which have the effect of producing a variety of luminous jets. The consequence is that flowers have a greater degree of splendour than fruits of the same colour and diameter. Thus a painting of roses seems larger than a painting of peaches of the same proportion, because each rose has several foci of light in its petals, which are both concave and convex, and because the peach, like all round substances, has only a single jet of light. These effects are very apparent in roses when the sun shines on them; they seem to have a luminous splendour, and the rose-tree that bears them has apparently a much larger diameter than when covered only with leaves. The case is very different in regard to a peach-tree of the same extent.

Having laid down this fundamental principle, it follows that, if the moon be a smooth spherical body, we should see at her full no other brilliant light than a luminous point which would

spread with gradually diminishing strength over the rest of her atmosphere. This would make her atmosphere appear salient and round, like those gilt globes which are to be seen at the top of some towers, and like all those which we meet with in paintings. So far from this, however, we find the moon flat and smooth like a plane mirror, and my conclusion is, that she transmits us light from every part of her hemisphere. Now it is only a light disseminated equally in all the parts of a globe which can make it appear flattened; this happens in fact in the case of a ball or coal heated in the midst of a furnace; we perceive nothing but the outside and the smooth surface. These effects are apparent in the sun, which, casting forth rays in all directions, shows, like the moon, only a flat surface without projection or convexity. Besides, these two orbs, of which the one sends forth his rays from all his globe, and the other reflects them from the whole of her hemisphere, appear to us, like flowers, of a larger diameter than they really are; for they both look smaller when seen from the summit of a high mountain in the middle region of the air, where their rays are less refracted.

I conclude then from the uniformity of the moon's light, that her mountains are arranged like reflectors, in order that they may transmit

the solar rays to our earth equally from all the points of her circumference. Besides, is it probable that God, who has given reflectors of such variety to simple flowers, should have refused them to the queen of night, destined as she is to transmit the solar rays to the whole of our globe?

It is, doubtless, in consequence of this that the moon always shows us the same face, and that she does not turn round on her axis; for in that case she would be liable to derange her transmission of light every hour or minute. Yet some astronomers allege that she has a rotatory motion on her axis, and they suppose this motion to coincide exactly with her revolution around the earth. My opinion is that they are mistaken in the cause, although not far wrong as to the effect. A harmony of this description would be an admirable proof of the wisdom of Providence, which would thus have established so just a correspondence between the rotatory motion of the moon and her revolution around the earth. Let us then represent the moon as fixed at the extremity of the radius of her terrestrial orbit, and let us suppose her to turn, when thus fixed, around the earth; the consequence necessarily is that she will regularly present us the same side, without having any rotatory movement on her axis. Astronomers say that in that movement she shows seven or eight degrees of the opposite

hemisphere, a point indeed on which they found their notion of her rotation ; but I cannot help differing from them, because it is evident that, on supposing her fixed on her centre to a radius of the earth, and on making her revolve around, we shall perceive a small part of her opposite hemisphere so soon as we cease to have it in front.

We may form an opinion of the different effects of light, by the naked eye, on comparing the reflected light of the earth on the moon with that of the moon on the earth. The latter seems much more vivid, although the planet transmitting it is not above a sixteenth of the size of ours. It deserves to be noticed that the axes of the reflectors of the moon are not altogether parallel to the radius of her orbit around the earth, but that they are somewhat divergent. If they were not formed, for example, otherwise than of parabolical curves parallel to the radius of her orbit, they would, even in full moon, transmit only a portion of light equal to the diameter of the moon, and they would illumine, on our globe, only a space of 750 leagues in width ; but so far from this the moon even when new, and when she has only a crescent luminous, conveys light to the whole terrestrial hemisphere. The conclusion is that the moon is at a distance suited to produce the greatest luminous effect possible on the earth,

and that by means of this distance we might find it possible to calculate the curvature of her reflectors. Nor have I any doubt that the earth has the chains of her ice-covered mountains, and particularly the glaciers of her poles, situated so as to produce some of those effects on the disk of the moon. Nature is capable of making burning mirrors with ice at least as well as our naturalists. Martenz, the navigator already mentioned, relates that, in his voyage to Spitzbergen, the reflection of the sun on the floating ice was so strong as to melt the tar of his ship's rigging.

I am now to hazard a few words on a subject far beyond my capacity ; but I am so much hurt at the ingratitude of some pretended scholars, who make use of the discoveries of men of genius to establish a doctrine of materialism, that I am anxious to show that nothing but common sense is necessary to upset their sophistry. What I am going to give is a sketch of the celestial reflectors, not from false hypothesis, but from the best founded observations. The maps of the moon which I have seen are just as little like the result of accurate observation as those of the sun. Astronomers represent the surface of the moon as irregularly furrowed, and as disfigured by the effect of volcanoes. It is true they mark some radial regions to which they have very properly given the names of several illustrious philoso-

phers, such as Plato, Tycho, Kepler, and Copernicus ; but they consider these rays as torrents of melted matter which have flowed from an immense volcano. This notion originated with Italian astronomers, and was, no doubt, suggested by the appearance of the lava of *Ætna*, or of *Vesuvius* in their own neighbourhood. Had they reasoned like intelligent naturalists, as in fact in other respects they were, they would have felt that chains of mountains, arranged in rays around a centre, could not be made of lava produced by a volcano, because the lava could not have gone so far from its crater without becoming cold. Those of Tycho occupy at least a third of the hemisphere of the moon, that is, an extent of two or three hundred leagues. The earth, which is so much more extensive, and whose ocean is much larger than all the seas in the moon, has not a volcano, the lava of which runs even to three leagues' distance from the place of eruption.

Besides, these chains of diverging mountains in the moon are in no respect similar to the productions of volcanic matter. While at the isle of France, I saw the moon through a twenty feet telescope ; she appeared to me almost throughout of a dazzling white, and similar to a mass of slaked lime, covered, in a great measure, with round bubbles placed one after the other, like

counters laid out on a table; some of them appearing to encroach on the others. These bubbles were not hollow like those of slaked lime, but in relieve, with a sinking in the middle and a small elevation in their centre. They are like the stone of a silver ring, of which the circumference and the middle are in relieve, and the intermediate space hollow; or they may be rather said to resemble the disk of a flower surrounded with a single petal. In regard to the situation of the mountains relatively to each other, my observation, I confess, was not minute, for which I am now very sorry, but I had then no idea that there existed harmonies in the mountains of a planet, since the naturalists did not admit them in the petals of flowers. Of all the descriptions I have read of the moon, there is only that of P. Beccaria which agrees with what I saw; but I must add that my observation, both of that planet and of his account, was less accurate than it ought to have been. According to him most mountains in the moon are rounded by returning on themselves, and contain a circular valley, in the middle of which is an eminence. The impression conveyed by this able astronomer deserves the more confidence, because he is, I believe, the first who discovered the volcano suspected by Hevelius to exist in the spot which, from its red appearance, has received the name of mount Porphyrites.

Herschell has more recently discovered three volcanoes in this planet; at the same time, I am not of opinion with Beccaria that these mountains, which have a round valley in the middle with a conical hill, and which form long radii one after the other, are either accumulations of lava or extinguished volcanoes; for their lavas and their craters, if blackened by fire, would not yield so clear and bright a light. A tract of land always looks dark at a distance; it is water, and the summits of mountains covered with ice and snow, that cast a splendour. I am inclined then to think that these mountains, which appear to return on themselves, and which contain a round valley with an eminence in the middle, are reflectors with their axes turned towards the earth. Without such a direction we should not see the interior of the greatest part of them at once, as we do at the time of full moon; most of the foci would undergo diminution, like the perspective in a picture, in consequence of the spherical shape of the moon. My notion therefore is that these luminous mountains, which have in their centre a valley and an eminence, are of sufficient height to have their summits always covered with ice. That such is their probable temperature appears from the result of different observations, both Cassini and Riccioli having concluded that their height exceeded three leagues perpendicular.

They are in fact so high as to make the limb of the moon appear full of teeth like a saw. It was by one of the deep valleys of her circumference, situated as a reflector relatively to the earth, that Don Ulloa, the Spaniard, on observing a total eclipse of the sun, on 24th June, 1778, perceived a very bright ray of the sun which passed by this deep ravine as through a hole.

I cannot therefore repeat too often that it is an admirable law of Providence that, while the planets turn round on their axis, the moons which transmit the solar rays to their planets do not so turn, because the consequence would be a perpetual disorder of the foci of their reverberators. On the other hand, if these foci were not arranged on the same hemisphere, and perpendicularly to the planet which they enlighten, there would be only one of them at a time that could shed its light on that planet.

At the same time we must not imagine that the moon serves solely for our convenience, and that she is herself devoid of inhabitants. It is clear that she has air and water, as we have seen that she has volcanoes; she must consequently have both animal and vegetable products, as well as a variety of other substances necessary, as we know from experience, to feed volcanoes. It would be idle to attempt any conjecture on the nature of the products of another planet, particu-

larly as so great discrepancies exist between those of America and our own hemisphere. If a few degrees to the north or south are productive of a difference on our globe, how much more is it likely that a difference will exist in regard to the moon, where the duration of day and night seems, as far as we can judge, to be no less than a fortnight. The disciples of Pythagoras were, perhaps of all ancient philosophers, best acquainted with Nature, and maintained the opinion that all the planets were inhabited. They will hardly, however, find converts to their notion that the plants and animals in the moon were fifteen times larger than on the earth; a notion probably founded on the length of the day in that planet. This, however, is no rule; for the grass and birds of Spitzbergen, where in summer there exists uninterrupted day-light during two or three months, are not larger than those of the same species in latitudes where the sun is much less time on the horizon. It must, at the same time, be admitted that the ponderous whales, and the monstrous white bears on the shores of that region, as well as the height of the northern fir, might be adduced in support of the fanciful idea of the Pythagoreans.

Be this as it may, there seems little reason to doubt that lunar plants have their flowers made quite differently from those of our globe, because

their petals are reflectors of the sun. Roses, and flowers which with us are ephemeral, probably last with them during a fortnight, and there may perhaps be animals accustomed to sleep and wake alternately for a similar period. A naturalist, accustomed to observe the migrations of birds and fishes, might conjecture that there is a number of both capable of making the tour of the moon along with the solar rays. Her circumference is computed at 2346 leagues, a distance which may be accomplished by a fast flying bird, or a swift swimming fish, in the course of a month.

There seems very little reason to doubt of this planet being inhabited by beings similar to ourselves, since its distance from the sun is nearly the same as our own. To judge from our telescopic observations, I should infer that her lofty mountains, and her round valleys, must offer a very pleasant variety of temperature, along with delightful prospects. The summits of these mountains are probably covered during the sun's absence with ice, which is melted by his presence. The beauty of the surrounding landscape must be reflected in the waters. The lakes afford, by their vapours, a supply of snow to the summits of the mountains, and the melting of the snow must feed a thousand rivulets which run into the adjacent lakes. When, after a long absence, the

sun begins to illumine the mountain-tops, the spectacle that ensues must be delightful. On looking through a telescope we see, at new moon, the first rays of the sun pass rapidly from peak to peak, and the glaciers sparkle like grains of powder which take fire one after the other. These rising fires, which shine over the deep and dark valleys, appear at first like so many successive mornings; but when, at the expiration of several days, the sun has made his power be felt, and has enlightened all the cavities, the numberless gleams of his light reflected by valleys, water, and ice, make a thousand shadows fall from the heights. The lakes repeat their reflection, and the echoes their murmurs.

The admirable harmonies of snow and verdure, of light and water, of sound and solitude, of which we see some appearance in the Alps, are much less wonderful than the spectacle of the same nature which is presented by an entire planet. It is then that a poet may suppose its inhabitants, attracted by the length of their days and the innumerable beauties of so many different situations, to descend the current of their streams, or sail along the tide of their mediterranean waters. To finish the picture he may imagine them to return home by the reflux of the tide, at the time when the sun begins to withdraw, and when night and silence reign in their hemisphere. It

is then that he may suppose the summits of their rocks to be covered with fresh snow ; the cascades of their rivulets, congealed by the invisible power, to remain suspended on their sides ; winter is over their heads, but summer is at their feet at the bottom of their valleys. The fires of a great number of volcanoes burn in the bosom of their lakes, and cast forth a dazzling splendour. The existence of the latter is put beyond all doubt, since Herschell, with a telescope which magnified only three hundred and twenty times, discovered, on the 22d of October, 1790, in a total eclipse of the moon, at least a hundred and fifty luminous points of a red colour.

On the other hand, the earth, lighted in its turn by the sun, transmits to the moon a portion of solar light, not so bright probably as that of the moon on the earth, but of greater extent ; for it proceeds from a diameter four times as large as that under which the moon appears to us. Although the earth turns round, the inhabitants of the moon, no doubt, perceive always the limb that is resplendent by means of the sea or icy mountains. It is likely that a spectator, looking through a telescope from our sister planet, might perceive our different oceans, our long frozen chains of Atlas, Taurus, Imaus, and Thibet, proceeding from west to east, as well as those of the Cordilleras running from north to

south ; and particularly those immense cupolas of ice which make the auroræ boreales radiate on each pole. It seems probable that the long night in the moon is cheered not only by the light reflected from our planet, but by the use of fire, which Nature has evidently bestowed on them as on us. The inhabitants of our frozen zone do not abandon themselves to sleep or inactivity during their long night. It was doubtless to enable man to make up for the absence of the sun, and to inhabit all the latitudes of the earth, that Nature gave to him alone the command of fire. Yet though the length of his sleep is not in correspondence with the daily absence of the orb of day, it seems to have some kind of correspondence with the extent of his annual absence. In infancy we sleep, during many more hours than in a subsequent period of life ; and our decrepitude, if not passed in absolute rest, requires an exemption from active exertion. The alternatives of waking and sleeping, which fill the intervals of life, appear regulated in some measure by the length of night in the central part of the world.

The ancients had a notion that the moon was the abode of dreams, and that it was thither that our souls repaired after death. If they supposed its inhabitants to sleep during the fortnight of absence of solar rays, they certainly allowed

them ample time for nocturnal visions. It was in pursuance of these mythological ideas that they gave the moon the name of Hecate, and made her preside over the lower regions. In truth, she is the queen of night and of winter, each of which may, by such a stretch of the imagination as the ancients were familiar with, be considered in the light of transient cessations of existence. But whether we have in our heart an innate sentiment of the laws of Nature, which gives us a consciousness of these laws before our intellect comprehends them ; whether there proceed from the stars other qualities than those of light, colour, and attraction, certain it is that all nations have considered the moon as influencing both the birth and the death of created beings. She is the Venus of the islanders of the South Sea, who celebrate her in their songs. The Greeks and Romans were accustomed to invoke her under the name of Lucina and Ilithyia to preside over the delivery of women, and finally over our death under the name of Hecate. Her pale light may be considered as exciting impressions of a mild and melancholy character, connected with the ideas of our entering on and quitting this stage of existence. She seems at once to tie and untie the links of life ; she vivifies the waters by her luminous rays, and she renders visible the mountains and forests buried

under the veil of night. It is on the recurrence of her different phases that the fishes glide along the currents of the ocean to multiply their species, and that carnivorous animals issue from their deserts in quest of prey. It is only by the mild light of the moon that a love scene can be rendered affecting ; and had I to paint the adieux of Andromache, I would place them on the same bank, and enlighten them with the same nocturnal ray, as I should use in delineating the funeral of Hector.

*Solar and Lunar Harmonies of the Powers of
Nature on the Earth.*

IF we refer to the testimony of the persons who by their labour are most disposed to observe the phases of the moon, and most interested in knowing their effects, we can have no doubt of their exercising an influence on all the revolutions of the atmosphere. Seamen and agriculturists are in the habit of expecting a change of weather at the new or at the full moon, and the former have a curious proverb, "that the moon consumes the clouds." The truth of this I have experienced repeatedly, particularly when on sea, where it was a principal part of my occupation to watch the atmosphere. I have often seen, at sun-set, dark clouds, which threatened stormy weather during the night, disappear on the rising of the moon; her rays were clearly seen to dissolve them, and at the end of an hour or two her mild light was spread all over the sea. An ancient poet would have said that this was Juno or Venus disarming Jupiter, and taking his thunder out of his hands. The ancients were in the habit of giving the moon a feminine character, not on account of her frequent changes, but for the mildness of her influence. Pliny says that he unties and loosens what the sun collects, and

affirms (book ix. chap. xxxi.) that, in her full, she tempers the cold of night by her rays.— In support of this he refers to the case of crustaceous fishes, such as crabs and lobsters, which retire, he says, in winter towards the coasts most exposed to the sun, from dread of cold, and which come forth in spring and autumn, principally when the moon is full, on account of the heat which they derive from her. Certain it is that, as she reflects a part of the sun's light, she must in like manner transmit a portion, however small, of his heat. Euripides gives her the name of daughter of the sun, although she is more commonly designated by poets as his sister. It is perhaps in the sense of Euripides that Virgil, who gives the sun the name of Phœbus, gives the moon that of Phœbe. The ancients fabled the orb of day to be drawn on a car with four horses, no doubt on account of the division of the year into four seasons; the moon, however, according to them, had only two horses. Mythologists were by no means agreed in regard to the colour of the latter, some calling them two white horses, while others chose, with reference to the changes of the moon, to call the one white and the other black. Both brother and sister were armed with a bow and quiver; and when Homer speaks of the natural death of any of his heroes, he says that Diana pierced him with her

mild arrows. From this and other allegories we see that the Greeks were not unacquainted with the principal influences of the moon; and had their knowledge been as extensive in natural history as their taste was exquisite in poetry, they would have made the moon preside over the principal harmonies of Nature by exhibiting merely a variation in her attendants. In consequence of not knowing the range of her influence they distributed her different functions to separate divinities, putting the air under the empire of Juno, the sea under that of Neptune, and the earth under that of Cybele.

It is the harmonies of the sun and moon which make the north-east and south-east winds blow from each side of the equator into the torrid zone, which they never fail to cool, because they participate of the temperature of the north and south poles. It is they which, in our hemisphere, give a dryness to the east wind, because, in coming to us, it traverses the vast and elevated continent of Asia. The opposite wind of the west is moist, because it passes over the Atlantic ocean and brings us its vapours. The south wind is warm as coming from the torrid zone, and the opposite wind of the north is cold, because it blows from a pole which is always covered with ice in consequence of its distance from the influence of the sun. Of these four

winds, namely dry and moist, warm and cold, all the temperatures of the atmosphere are composed. Yet, however irregular the surface of the globe may appear, there is no place, whether in the bosom of the sea, or in the heart of the continent, whether in the torrid, temperate, or frozen zones, that does not experience similar harmonies by means of icy mountains and mediterranean waters, by means of higher or lower winds, or finally by means of summers and winters. These harmonies are similar in the hemisphere opposite to us, after making a due allowance for the difference of circumstances and situation. In that atmosphere, the east wind is humid, the west dry, the north warm, the south cold. It is the sun and moon which, in their course, vary the winds for the purpose of regulating the temperature of the atmosphere, the motion of the waters, the regeneration of minerals, the vegetation of plants, the respiration of animals, and the navigation of man. It is these orbs which, after establishing between the winds a series of physical, ærial, aquatic, terrestrial, vegetable, animal, and human harmonies, produce among them likewise what may be called moral harmonies. These occur chiefly when the sun returns to the winter solstice, and the moon to the summer solstice; occasions on which the winds blow from the north and west, or from the west

and south, tempering each other, and maintaining what we may term a fraternal correspondence. The sun and moon, when united on the equator at the spring equinox, may be considered as giving the winds a kind of conjugal harmony, when to the condensing breezes of the north they oppose the expanding breezes of the south ; when to the dry east wind they oppose the humid west, and prepare, by these contrasts, the future growth of the products of Nature. Again, they may be said to give the winds a maternal character, when the sun at the summer, and the moon at the winter, solstice, call forth the east winds which ripen the seeds and favour the multiplication of animals. It is then that the little birds come forth in all directions from their nests, and that the bees swarm for the last time in the season.

I have given to the winds which reign at these different epochs the names of fraternal, conjugal, and maternal, because friendship arises from correspondence, love from contrast, and maternity from the increase of progeny. But when the sun and moon, on the point of changing their hemisphere, meet at the autumnal equinox, they group the winds in tribes or species of similar kinds. It is then that they make all the children of the north come forth to blow to the south the innumerable tribes of swallows, quails, and ring-

doves, which traverse the sea to settle in a more temperate climate. The influence of the sun and moon collects winds of various kinds, when they make them blow in turns from each of the thirty-two points of our horizon; when they make the winds of each horizon harmonize with those of other horizons of the globe; and finally, when at the end of the year they make the whole atmosphere circulate from one pole to another.

We have attempted, in the course of this work, to treat of the harmonies of the sun and moon with animated beings; but these harmonies are inexhaustible. All animals in short have the phases of their life regulated by those of the sun and moon. Scarcely does the orb of day sink under the horizon, when all animals are struck with lethargy, with the exception of those to whom night is the season of excursion. The wakefulness of the latter proves, as well as a number of other effects of Nature, that sleep is not a mere mechanical result of the absence of the sun. Insects now take refuge in the heart of plants; birds, nestling in foliage, repose with their heads under their wings; a flock of sheep retires to rest under the shelter of a hedge, and the watchful dog who guards them sinks into slumber, after having turned his body several times round. All the functions of intelligence are suspended in the absence of that orb which produces its images;

day, several of the smaller insects find their existence terminated by the setting sun, for the ephemeral fly does not see a second dawn. Soon, however, comes forth the moon to give new life to the world. Like the sun, she has her plants, her insects, her birds, her quadrupeds; it is by her doubtful light that the *mirabilis* and other nocturnal plants open their flowers; that various species of fish pursue their progress to another clime; that the tortoise lays her eggs on the solitary strand; and that the nightingale, the bird of spring, delights to make the echoes of the forest resound with its song.

Many insects live only during one of the lunar quarters; others live a fortnight, others a month; some go through an entire season, and die at the summer solstice; but the great number perishes at the autumnal equinox, at the time when the sun proceeds to enlighten another hemisphere. It is then that the marmot retires and falls asleep in the hollow rock, to awake only at the return of the spring equinox; for to her the year seems a day and a night of six months each. A crowd of animals suspend their labours in our hemisphere at the same season; the bees take rest in their hives; several species of birds, like the quail and swallows, follow the course of the sun, and pass into the hemisphere which he warms; while a multitude perishes in that which he

abandons. Carnivorous animals are dispersed in all directions to devour their remains; the furred fox, and the white bear, penetrate even into the bosom of the frozen zone, into regions of snow and ice, which hardly any living animal can inhabit. The currents of the ocean still carry to the shore a quantity of marine substances coming from the temperate and torrid zones. It is thus that the instinct which carries the foxes and white bears to the sea coast of our frozen zone during winter leads me to suppose that the currents of the ocean bring them a supply of food, which would not be the case unless these currents descended from an opposite pole.

There exists the greatest differences in respect to the extent of the orbits of the different planets ; one requires only a month for its revolution round the sun ; others respectively three months, eight months, two years, twelve years, thirty years, and finally, nearly eighty-four years. To all these a calculator may find, or fancy that he finds, corresponding periods in the duration of vegetable and animal life. He may compute that several kinds of insects, such as butterflies, live between one month and eight ; others, such as the May-bug, two years, or one year of Mars. Several birds and quadrupeds, among others goats, are understood to live twelve years, or a year of Jupiter ; other quadrupeds thirty years, or a year

of Saturn, while the life of man may be occasionally brought forward as completing the longest period of all, the revolution of the *Georgium Sidus*. A farther inquiry might lead such a speculator to ascertain examples of still longer life in the animal and vegetable world, and to find perhaps parallels to the return of comets.

Leaving these visionary speculations, I am to observe that the animals which die of old age go off the stage, as they came upon it, without being aware of the change. The last steps in the descent of life are on as gentle a slope as those of its commencement. They have not been led by vain ambition to climb precipices, or to incur a violent death ; but, faithful to the laws received from Nature, they restore her that instinct which has now become useless in an exhausted machine : they expire without regret, remorse, or murmur. When a tranquil death takes place in the night, the moon may be said to untie those links which she strung together at the time of birth. Her light still sheds a pale ray over their breathless bodies, and covers them with her funereal crape ; while the earth, their common mother, which receives them in her bosom, raises as an ornament to their tomb the broad foliage of the burdock, or a garland of ivy. Time, like a reaper, cuts down generation after generation of animals ; and he likewise plants and gathers, but in com-

paratively smaller members, the individuals of our species.

Let man, however, not vent complaints on the short duration of life ; his celestial harmonies will subsist after his terrestrial are at an end. The author of Nature has attached to his bodily existence several years of bitterness and trial ; but he has given his soul an eternity of joy and delight. He is by no means a being condemned to creep on this globe, or to tear its bosom with the ploughshare for the sake of supporting a frail existence. His life is transient, but it has an object, and that object is sublime. Behold him expiring in his bed ; his body is in pain, but he already contemplates a God prepared to receive him. Can this being, so weak and helpless, be so strongly impressed with a thought that would not have been sanctioned by the Creator of all thoughts ? No ; it is not in vain that he has opened his hopes to a future destiny. He quits a world of darkness for a world of light ; he quits misfortune, and frail mortals like himself, to enter on an abode where death is not known. His eyes will no longer be distressed by the sight of distress ; every object will be replete with content and satisfaction. How great must be the transports of man when, escaped from the agony of life, he sees the gates of Heaven open to him. He is now no longer a creature of the dust ; he

is an angel, a superior being, advanced to an upper region. After remaining during a season a slave and in irons, now behold him free, and the possessor of a new domain ! But lately sad and suffering he dragged his step towards death, and he rises from it full of glory. He inhabited a world covered with the funereal cypress, bedewed with tears, where all is subject to change and to death ; where we indulge love only to experience suffering, and where we meet our friends only to part with them. He is now transported to an abode where all is eternal ; his soul is kindled with everlasting love, and he casts, from the height of the firmament, a sympathizing look towards his fellow creatures in this lower world.

EMPSAEL;
AN EPISODE, OR DIALOGUE,
ILLUSTRATIVE OF
HUMAN HARMONIES.

EMPSAEL.

AT the foot of the lofty mountains of Atlas, on the borders of the sea, we still find the remains of a simple cottage : a young French female, the slave and spouse of Empsael, had caused it to be erected to preserve the remembrance of her native country. Zoraid, when surrounded by slaves, remembered that such had been her own lot, and endeavoured to alleviate their distress ; but her influence on the heart of her husband was not such as to obtain their liberty. Empsael, the minister of the Emperor of Morocco, had not always been at the side of the throne ; his heart was magnanimous, but it was exposed to bitter recollections, and he had sworn to live only for the gratification of revenge. He was born in the country of Bambouk, on the banks of the river Faleme which rolls gold in its sands, and pours its waters into the ample waves of the Senegal. His father and mother lived there happy, and enjoyed abundance in the midst of simplicity. Calabash and cotton trees, the plantain and the palm, surrounded their cottage, and supplied them every year with fruits, with shade, with liquor, and even with the materials of clothing and furniture. A field of

millet and roots afforded abundant supply to their wants, and morning and evening they came forth to admire the sun, which, in that favoured region, makes the earth produce a double crop in the course of the year. Two sons, Empsael and Almiri, rendered their happiness complete. The figure of the orb of day had been impressed on their breast at the time of their birth, in grateful testimony of his beneficence. Among these children of nature, every man adores that power to whom he thinks himself most pledged in gratitude. Wherever his feeble reason perceives, or imagines that it perceives, a superior intelligence, were it even in a bird, a tree, or a rock, it fixes its attention there, and bestows adoration on its image. The sun was then the patron deity of Empsael and Almiri; they were called children of the sun, and led as happy a life as if their days had actually been superintended by a heavenly being. The great pleasure of Empsael was to swim across the Faleme, and to carry his little brother on his back. As he advanced in years, he delighted in the chase of wild beasts, and was accustomed to gladden the heart of his mother when he brought her the skin of a leopard or a panther. Often did this happy family pass their evening hours in cheerful amusement, or in dancing by moon-light with the young females of the neighbourhood, who were mild and in-

nocent daughters of nature. Empsael had by this time reached the age of love, and his heart had already made a choice.

It was thus that they led with their parents a free and happy life, without injuring any one, and doing more or less good to all of their acquaintance. No traveller passed their cabin without receiving hospitable treatment: whether known or unknown, he was invited to remain there a day, a week, a month, or even a year, if he chose, and was treated with still greater attention at the time of his departure than of his arrival. One day, two Europeans came to visit this happy family, who till then had never seen a white countenance. The first feeling of Empsael, on looking at them, was a sentiment of gratitude towards the sun; his uncivilized countrymen being in the habit of considering an unknown species of fruit or birds in the wood, a fresh gift of the orb of day. On seeing white men for the first time, Empsael imagined that the sun had just given him friends of a new kind. They soon appeared to him much superior to himself or to others of his nation, and discovered a knowledge of arts which excited his admiration, and even his awe. But if they possessed more knowledge, they had also more wants. Empsael's father redoubled his hospitable attentions to them, particularly as from ignorance

of the language, they could not make their desires known. They found means however to express by signs that they were returning towards their nation in the west, and that they were coming from the east, where they had been in quest of gold, of which they showed some grains in shells. By way of gratifying their desire for gold they were led to the borders of the Faleme, and spangles were pointed out to them among the sands on its shores. At the sight of this metal they gave lively demonstrations of joy, and seemed to relinquish all other cares for that of collecting a quantity of it. They employed in this way even the hours set apart for meals and sleep, taking no account of the other productions of the country, nor of its palm-trees, nor of their hospitable entertainers. All the family were surprised at so singular a passion, but exerted themselves to assist them in collecting this apparently useless dust in vases made of the calabash. The quantity thus got together was large; but there would have been no end of their gathering, had not the approach of the rainy season, and of the consequent overflow of the river, obliged them to think of continuing their journey.

As Empsaël had learned some words of their language in order to be of use to them, his parents consented, on the application of the stran-

gers, that he should go as their guide. His young brother, accustomed to see him daily, was eager to accompany him; their mother was at first averse to it, but their father having enjoined them not to quit the frontiers of their country, she desisted from opposition. The two young guides now conducted the Europeans from village to village across the country of Bambouk, and were hospitably entertained in all places, until they reached the frontiers of a people hostile to Empsael's countrymen, but friendly to Europeans. On this spot the young Africans were preparing to take their leave, when, during the night, the perfidious strangers tied their hands, and, having put a gag in their mouths and a sack on their heads, carried them off prisoners. In this cruel situation, they were led across forests all the way to the sea-side, where the traitors divided their booty; the one carrying off Empsael, and the other his young brother, who, when it came to a separation, burst into lamentable cries, calling for assistance on that mother whose happiness was involved in his, and on that brother who could no longer soften his misery. But all appeal to clemency was vain; the two amiable youths were torn asunder. The European who carried off Empsael, a Spaniard by birth, sold him to a captain of his nation bound on a voyage to St. Domingo. During the whole passage he

was in a state of suffering from confined air, bad provisions, and the blows of those barbarians who had heaped by hundreds, in the ship's hold, his unhappy countrymen, carried off from different parts of Africa. On arriving at St. Domingo, he was sold again to a Spanish planter, who seemed to take a pleasure in exercising severity on those around him; carrying, according to the custom of his country, a poignard at his side, and a chaplet in his hand. So soon as he learned that Empsaël spoke a few words of his language, he addressed him on the subject of religion: the forlorn slave found Christianity so consoling, and his own situation so unhappy, that he became desirous to embrace it. He was consequently baptized and told, "You are now become one of our brethren, a child of God like ourselves." His name was now changed, and he received that of his master Pedro Ozorio.

Empsaël was now in hopes that his master would treat him as in his own country, where fathers make their children bear the name of their friends for the sake of showing them greater affection. He flattered himself with having become an object of respect to a Spaniard, and of kindness on the part of his master. But he little knew the selfish intentions of Ozorio, who, finding him possessed of talent, determined on educating him merely with the view of making

him useful for his own purposes. He began accordingly to teach him to read and write, with a lash suspended over him, as if this was the proper method of giving him an idea of the mildness of Christianity. Empsael, accustomed to be caressed by his parents, was surprised on finding himself treated with so much harshness by his pretended benefactor. The latter spoke to him of his salvation, only to throw him into despair, of the goodness of God only to menace him with the terror of punishment, and of the happiness of Christians only by loading him with severity in this world, and with alarm for the next. What a harsh tyrant was this Spaniard, devoid of the excuse of ignorance or error, and endowed as he was with a knowledge of the true faith and of the goodness of God!

Empsael, on being enabled to read the history of Europeans, was astonished at the crimes with which it was replete. He met every where with quarrels between the citizens of the same commonwealth, with law-suits between families, pride in every class, war between nation and nation, and with treachery towards innocent tribes, whom the ambitious on all occasions endeavoured to render subject by means of fire and sword. Alas! he soon learned, by new companions of his slavery, that the Spanish traitors, who had carried off him and his brother, had at

the same time taken possession of his country, on recording a declaration that it was conquered for their prince and their God; a perfidious custom common among ungrateful Europeans towards the innocent tribes who receive them with hospitality. The king of Spain, having learned that gold was found in abundance in the territory of Bambouk, lost no time in sending a military force thither. The village was burned, and Empsael's father killed in fighting for its defence; as for his mother, she had died of grief some time after the seizure of her sons, pouring forth vain appeals to the golden sands of the Faleme, and to the sun which had scattered such fatal treasures on its banks.

Empsael had courage to resist his own misfortunes, but he was ill prepared to bear those of his country. He deliberated whether he ought not to die by his own hands.—“Die,” he said, “and my tyrants survive! they will live for the misfortune of my country; let me also live for vengeance.” His first thought was to begin this vengeance on his master, but he recollected himself and said, “What useful purpose will his death serve? It is not on a single man, but on a nation that I have to take vengeance.” He soon saw that all Europe was guilty of similar injustice to his countrymen. His next thought was to get, if possible, out of his state of thral-

dom. One day, when reflecting on the means of accomplishing this, he perceived a vessel sailing near the coast of St. Domingo. As he was an excellent swimmer, he threw himself into the water, and reached her, though at the distance of two leagues. She proved to be a Dutch ship, and Empsael now thought himself at liberty under a republican flag; but the captain, struck with his strength and boldness, told him that he took him into his employment. There was little doubt that the captain had no such right, and did this in violation of all humanity; but reason was out of the question, his being a negro was quite enough. He was subsequently sold to an English captain sailing to Jamaica, and, in the sequel, sold or bartered successively to Flemings, Danes, Swedes, Frenchmen, and Jews, for money, iron, tobacco, coffee, a horse, or an ox. All his masters were pleased with his youth, his size, and his spirit; but aiming at subjecting his disposition by violence, they met with a degree of resistance which soon disgusted them. They treated him as a brute, but he was not long in showing himself a man. Each of them imprinted on his skin the seal of his slavery with a red hot iron. At last he fell into the hands of an Italian, who proved among the harshest of his tyrants, and who endeavoured to break his spirit by dint of torture; but being unable to succeed, and not

choosing to put him to death, by which he would lose his value, he sold him to Muley Ishmael, Emperor of Morocco, to whom he was in the habit of secretly conveying gunpowder, balls, and cannon. He was not aware that in Empsael he gave the Moorish sovereign a fatal instrument of hostility to the Christians: no sooner was the captive again on his native continent, than his soul became re-animated, as the palm-tree raises its head after a storm. He loses no time in abjuring the religion of his persecutors, and embracing that of Mahomet. When the Christians baptize their slaves, it is with the selfish view of consecrating their fetters; but when the Mahometans circumcise their slaves, it is for the purpose of setting them at liberty. This was accordingly the first act of justice which they showed to their new convert. Animated by his release, he soon distinguished himself in a sanguinary war against the Spaniards: his size, his strength, and, above all, his hatred to Europeans, were highly gratifying to the emperor, in whose veins there ran a kindred blood to that of Empsael. The latter, having received the command of a ship, was fortunate in his cruizes, and was soon honoured with the entire confidence of Muley Ishmael. Successively raised to the station of basha of Alnanzor, Tetuan, Sallee, Cape d'Aguer, and finally, admiral and minister of the kingdoms of

Fez and Morocco, he was, in a manner, loaded with wealth and dignity. But the highest gratification to him was that of vengeance against Europeans; he carried into the two seas the terror of the Crescent, and pursued European ships in all directions; in the Mediterranean, on the coast of Italy, of Malta, along the shores of Spain, Portugal, and even of France and England. He extended his cruises along the coast of Guinea, where Christians go to take negroes even in their cradles. His vessels were in the habit of approaching the shores of Europe night and day, and of carrying off entire families; nor did those who fell into his hands receive any mitigation of the ordinary lot of captives.

Still his tender partner sought to do every thing in her power to appease this thirst of vengeance; every day Zoraid ventured, even under the eyes of Empsaël, to share the value of her ornaments with the unfortunate beings who surrounded her. She lived only to indulge feelings of affection; they were directed particularly towards the unfortunate, and her great comfort was in ameliorating their condition. These poor slaves were sometimes seen in the forest, near the deserted city of the Lions, or on the hill where stood the cottage to which Zoraid came to revive the recollection of her native country. It was in such spots that the captives held their conversations, and alle-

viated each other's grief by the communication of their most tender thoughts. One evening *Januario*, who had been formerly a Neapolitan groom, and *Williams*, a Dutch pilot, happened to meet under the date-trees which adjoined the cottage. The labour of the day was at a close ; the hour of rest had arrived ; the unfortunate soon draw to each other, and they proceeded to sit down on a rock, covered with cacti and aloes, which commanded a prospect over the country. The rays of the setting sun gilded the towers of the city of *Aqua*, and the distant summits of the ridge of *Atlas*. After a moment of silence, *Januario* addressed his comrade :

Januario. My dear *Williams*, you form all my consolation ; for nothing can be more wretched than the state of a groom in slavery. He is exposed, all day long, to the wind, the sun, and the rain, in training fiery horses ; but this is not the worst, for in the chase he must follow wild beasts, and a master still wilder than them. He must run along a mountain, through the thickets, bushes, and on the brinks of precipices. I declare to you that nothing but the attachment of a friend can make me support this miserable condition.

Williams. Your situation is less an object of pity than mine. Night and day, a seaman is the sport of the elements ; at one time fire may con-

sume his vessel ; a blast overset it at another ; or finally it may be dashed against rocks ; yet, after all our fatigue and our danger, we experience little else than ingratitude from the majority of mankind. A state of slavery adds very little to our sufferings ; we are indeed obliged to embark in a privateer, where we are forced, in the midst of fire, battle, and storm, to contribute, at the risk of our lives, to the captivity of our own countrymen. You thus see that a mariner's life is almost as unfortunate as any can be ; but love and my pipe console me in every situation.

Januario. How can you possibly compare your profession with mine ? Nothing, I can assure you, is a task of such difficulty as to train a courser.

Williams. No courser is so ungovernable as the sea in a storm.

Januario. No occupation requires so much skill as that of a groom.

Williams. Be assured it is not to be compared, in point of difficulty, to that of a pilot. A vessel is the master-piece of the human mind ; all the arts conduce to its equipment, and all the sciences to its management.

Januario. Horsemanship is the occupation of the nobles ; seamanship of the lower orders. Kings and great men take a pride in excelling in

riding, while they care very little about the reputation of managing a vessel.

Williams. That is because kings and great men choose to mount horses trained to obey them, and not vessels which flatter nobody ; your profession is that of a courtier ; mine is that of a free-man ; hence the reason why horsemanship is esteemed in monarchies, and navigation in republics.

Januario. Let us drop that subject, Mr. Williams. No sooner did I see at a distance the veil of my admired Rosa Alba suspended from a tree near the adjoining cottages, than I concluded that she had something of importance to tell me. I am glad to think that this signal of my mistress, a signal invented by me, gives you, from time to time, an opportunity to see your fair one, who is always along with her.

Williams. I would not have moved from the spot where I was, had I not recognized the signal of Margaret, by a smoke arising on the bank.

Januario. Very good ; but let us see what my lady has got to say. I have no doubt of succeeding in carrying her hence. I have got an infallible means of escape ; I mean during night to mount one of Empsael's best horses, to place her behind me, and to fly with her to the barbarians

inhabiting Mount Atlas. You can do the same with your favourite.

Williams. I am no horseman ; but I have a better expedient in view to deliver her, Zoraid, their female attendants, and even their lovers. I mean to choose a time when the wind is favourable, to lay hold of a fisherman's bark, and to set sail, were it even in the day-time, towards our native land.

Januario. Your project is good for nothing.

Williams. You think only of your personal concerns ; and I concern myself for the interest of all. (*At this time Rosa Alba, a Neapolitan in slavery, and Margaret, a Dutch woman, in slavery, with a cage, containing two turtle-doves in her hand, came up to Williams.*)

Margaret. How ! cannot two unfortunate slaves contrive to agree ?

Rosa Alba. No, Empsael could not have thought of any thing worse for European slaves than to put together Italian, French, English, Dutch, Portuguese, and Spaniards. Each of them wishing to be master, they pass their time in quarrelling.

Margaret. How strange ! little birds, although of different species, form concerts in the same aviary ; and you, who are men, cannot refrain from bickering, though in irons ! O my friends !

Januario. My Rosa, I was speaking of the method of restoring you to liberty.

Rosa Alba. Januario, I did not make you come here to talk about getting away ; the question is not to quit Zoraid, but to serve her.

Margaret. My dear Williams, Zoraid does not wish to make her escape ; she is tied to Empsael by duty as well as by affection : he is her husband.

Rosa Alba (to Januario). You know how often her kind attentions have afforded relief to the slaves ; she is at present desirous of adopting some farther means to improve their situation. Give notice then to Father de la Merci, who is just arrived from Italy to redeem captives, to come and speak to her immediately.

Januario. I shall do so forthwith.

Margaret. And Williams, you know that Jacob, the rich Portuguese Jew, who has connexions in Holland, arrived here some days ago from Morocco. He took a walk this morning around the camp ; tell him to come and speak to my mistress ; she wishes to sell him some jewels that she may distribute the money among the slaves.

Williams. Oh ! as soon as there is any talk of buying jewels, be assured that he will soon make his appearance.

Rosa Alba. Make haste, Januario, Empsael will be soon home; where did you leave him?

Januario. In the midst of the forest, at the entrance of the city of the Lions, where he was engaged alone, with his usual intrepidity.

Rosa Alba. Ah! a ruined town, of which you have spoken to me so often, and which is inhabited only by lions. May he meet there with as fierce a monster as himself, who may devour him. But make haste, Januario; my mistress is all impatience to speak to this charitable Father who is arrived. Go, but, before setting out, shake hands with Williams.

Williams. Oh! with all my heart. (*He holds out his hand to Januario.*)

Januario. I bear no spite, upon my honour.

Margaret. Shake hands then I say. (*Williams goes up to Januario, who receives his shake coldly*). Williams, recollect the motto of Holland, our native country, "Small things grow great by concord, and great are ruined by discord."

Rosa Alba. Go, my friends, make haste, and no more disputes. Adieu, adieu. (*They go out, leaving the two female slaves.*) Without women men would live among each other like wolves; I think it very lucky that Zoraid, who has so feeling a heart, should not have seen their quarrel; but what have you got in that cage?

Margaret. These are two turtle-doves, which I found by the sea-shore, when bathing at the foot of a palm-tree. I had just lighted a great fire there, to give Williams notice to come to the place where we now are, when all at once these two birds, who had flown across the sea, sunk down beside me on a tuft of acanthus. They were so fatigued that they could not fly off; and as soon as I took the one, the other, instead of attempting to go to a distance, came of his own accord to throw himself in my bosom.

Rosa Alba. This is a good token for you; it is a notice that you will be happy in your love.

Margaret. I intended them for Zoraid, and was in hopes to find her here.

Rosa Alba. She will not be long in coming; but as her apartments are not ready, let us lose no time in getting them in order. (*Both proceed to the cottage and open the gate and windows.*) Let us put these cushions in order; open these windows towards the sea; let us give air to this room, and freshen it with rose-water; the day has been oppressively hot.

Margaret. The sea-air discolours these silver vases; but I will rub them till they shine as bright as in my own country.

Rosa Alba. We shall not have time to do it, evening is coming on. Zoraid will soon come here to enjoy the cool air, and Empsael will not

be long after her. That Morocco minister, who is as black as an inhabitant of the nether world, finds no happy moments except when beside our amiable mistress. But how does it happen that the blacks have so much power in this country? The first duties of the empire are discharged by them; not only is Empsael a black, but the emperor himself is a mulatto.

Margaret. The influence of black men arises from that of black women; the emperor's favourite is quite black.

Rosa Alba. I know it; but how happens it that black women have so much sway here, where there are white women of such beauty?

Margaret. I have heard the matter accounted for thus: Once on a day, a King of Morocco sent his son to conquer, in the interior of Africa, the kingdom of Gago, where we get the best gold. His army, after consuming all its provisions in traversing the deserts of Lybia, was on the point of perishing by hunger and thirst, being surrounded by an army of the negroes of Gago, who had come to defend their country. The Prince of Morocco being unable, on account of the weakness of his troops, either to fight a battle or to march back, was in great distress. One evening, when walking very seriously through his camp, he saw two soldiers playing at chess, one of whom said to the other: "Your king is like our prince,

he can neither advance nor retreat." The prince made the soldier come to him, and said that, as he spoke with so much decision, and ventured to pass an opinion on his situation, it was for him to say by what means he could get out of the scrape in which they then were.

Rosa Alba. This was a very hard point.

Margaret. The soldier, having apologized to his prince for his boldness, answered that he had in his thoughts a plan which would do him great honour if it should succeed; this was no other than to send an ambassador to the enemies' king to tell him that, being young and desirous of marrying, he had heard the highest eulogium on his daughter; that he was come to beg of him to give her him in marriage, and that he would not have put himself at the head of an army, but in order to perform in safety so long a journey across a strange country. The prince took the soldier's advice, and with the greatest success; the negro King of Gago thought it a great honour to give his daughter to the Prince of Morocco; he loaded his son-in-law with wealth, and made him a present, among other things, of four large gold balls; the same that are, at this day, at the top of the mosque of the palace at Morocco.*

* See a Voyage to Africa by Jean Moquet, the founder of the Jardin des Plantes at Paris. He related himself this histo-

Rosa Alba. Is it not those which we see shining from such a distance in the country?

Margaret. It is. Since that marriage the rich kingdom of Gago belongs to the King of Morocco; it is thus that their descendants are allied by consanguinity to the blacks.

Rosa Alba. Your history is very curious; it was love then which gave a preponderance to the blacks in this country by means of black women; but the turn may now come round to the white.

rical anecdote, on his return from Morocco, to Henry IV. of France, who was highly amused by it. Dapper, in his Description of Africa, says that the kingdom of Gago is to the west of that of Guber. The principal town, which gives its name to the whole district, is at the distance of 150 leagues from Tombuctoo, between the south and east, in thirty-five degrees of east longitude, and in eight degrees, thirty minutes, of north latitude. A great deal of gold is found in this kingdom, and sold to Morocco merchants, who travel generally in a caravan of two or three hundred persons. During two months they traverse tracks which are little better than sandy and uninhabited deserts, where there is no such thing as a path, and where they are obliged to guide themselves by the sun, the moon, and the stars, not without considerable danger of losing their way, or of suffering from hunger and thirst. Their prince has been tributary to the King of Morocco, since Muley Hanef got hold of the city of Gago, at the time of his expedition against the negroes. (Dapper, p. 224, folio edition.) I have followed the tradition of Moquet, who attributes to the power of love the conquest of the kingdom of Gago.

Zoraid has great influence over the mind of Empsael, who never seems to be happy but when he is near her. Although the favourite of the Emperor, he prefers to his court this solitude, because she likes it, and to his castle of Morocco this cottage, which she has caused to be built in the European fashion. Since Zoraid has discovered such a fondness for it, the minister sends every day new furniture to this place, along with chains of pearls, ostrich eggs, and pieces of India muslin. He collects around her a strange contrast of magnificence and simplicity, of war and gallantry*. By what means has she been able to captivate this formidable black? For my part, I do not even venture to look at him from a distance; as soon as I see his red cloak, his cuirass of leopard's skin, his black turban surmounted with a plume and a steel crescent, his poignard and his two cutlasses, all of steel, I tremble like a leaf. His whole mind seems to be occupied in fitting out ships, that he may have in his hands slaves from every nation in Europe, and may load them with labour in the deserts. What charms must Zoraid employ to captivate her ferocious partner, who seems to me to take pleasure in nothing but carnage? She leads him like a lamb, yet she does not know how to sing, to dance, or to play on any instrument; her mind is very little cultivated, for she hardly knows how

to read. For my part, I received a very good education, but I admit that her natural powers surpass all my acquirements. Now you, who are from Holland, have certainly a much fresher complexion than her's; the English female captive has a prettier shape; the Russian more comeliness; and I have been told that I had more animation in my eyes; yet I find Zoraid more an object of affection than any of us; her company alone makes me support the loss of liberty. When she comes among us, one would say, from our respectful behaviour, that we were slaves around their Sultana, and, from our affection, that we were companions around their friend. You who passed a part of your prime along with her, tell me, pray, from what country she comes, and by what means she contrives to excite so much respect and affection; the object of a woman in all situations is to please, and she ought to study the means of doing it even when in fetters.

Margaret. Our mistress is a native of France, that country so celebrated for the attractions of its females. For my part, the greatest attraction that I find in her is an exquisite sensibility, which, joined to a great stock of goodness, inclines her always to do obliging things, or to say what is pleasant. As to her dress, it is very simple; she prefers a plain gown to all the rich stuffs of India, and flowers to precious stones. As her diet con-

sists merely of vegetables, her complexion is always good; and the motions of her body are as pleasant as the sensations of her mind.

Rosa Alba. She has a great deal of taste in her dress; those long flowing gowns, which suit her shape so well, appear to me to set her off to great advantage. This, I believe, was the ancient Greek dress; the modern Greek is much inferior. If I am ever fortunate enough to return home, I shall endeavour to introduce the fashion of these antique gowns, which are at once so simple and so noble.

Margaret. How can you talk of returning home? There is no such thing as getting away from hence: Empsaël never gives liberty to a slave, and it is that which makes Zoraid so low-spirited. Her sensibility makes her very wretched: I often surprise her in tears, but she wipes them away as soon as she sees that I observe her.

Rosa Alba. Let us endeavour to amuse her, and let us redouble our anxiety to please her. But here she comes, and nothing is ready.

Zoraid. My dear companions, desist from your labour; the heat is oppressive; take rest; you are too zealous in all that you undertake.

Rosa Alba (*bowing respectfully*). Sultana, it is you who inspire us with zeal.

Zoraid. Do not call me Sultana; I am your friend, your companion, a slave like yourself.

Let us rest on these rocks, where we shall breathe in liberty. Petrowna, did you tell the head-cook to give refreshment to the sick slaves ?

Petrowna. Yes, madam ; that black murmured a little at it, but the slaves pour blessings on you.

Zoraid. Let them above all take care of the old men ; the aged are exposed to neglect in all situations, but particularly in a state of slavery.

Petrowna. Madam, particular care is taken of those of your nation.

Zoraid. All the unfortunate are of my nation ; a preference should be given only to the most infirm ; I am hopeful however that I shall be useful to those who are in health. Rosa Alba, did you send word to Father de la Merci to come to speak to me ?

Rosa Alba. Yes, madam, I charged Januario to tell him.

Dalton. Two stout frigates of my country would be quite enough to prevent all the petty states of Africa from making a single European captive ; these frigates would not cost in their equipment a tenth part of what it costs to redeem the captives. Barbarians are to be kept down only by force.

Margaret. Madam, I have sent word to the Portuguese Jew to come here.

Zoraid. My dear friends, you anticipate my

wishes in every thing. (*To Margaret.*) What have you got in that cage?

Margaret. These are two birds, which I beg you will accept. I found them exhausted on the borders of the sea, after they had flown over it; no sooner had I taken one than the other came to me of its own accord. I know not if they are two lovers, or if they are of the same sex; both are of a size, both are of a pearly grey; both have the half of a black circle around their necks.

Zoraid. Ah! these are turtle doves of my country; this is the male and female; Nature has shared between them a conjugal ring as the sign of an equal and perfect union. I pray you, give them victuals in abundance, and, after they have had a night's rest, set them at liberty tomorrow on the rising of the dawn; the birds of love should carry no other chain. My dear friends, may it be one day your lot to know no other fetters!

Dalton. My dear mistress, here is something to protect your complexion from the sun's rays; take this hat, it is of straw and made in England.

Zoraid. It is delightful; whatever comes from England is admirably wrought.

Dalton. There is no industry but in free countries.

Zoraid. What do you bring me there, my honest Russian.

Petrowna. Madam, these are apples from Mount Atlas.

Zoraid. What! apples of my country growing in Africa! I cannot tell you how much this pleases me; no fruit is so pleasant as that of one's home.

Rosa Alba. I have nothing to offer you to-day except my most tender affection.

Zoraid. My dear Neapolitan, it is the gift which flatters me most; it is that which enables me to repay the attention of you and your companions.

Rosa Alba. Ah! could I be but happy enough to receive you some day in Naples, that delightful abode!

Dalton. And could I but receive you in England!

Margaret. And I in Holland! My dear Zoraid, you would never wish to go out of it; there is not a single poor person there unprovided with the necessaries of life.

Petrowna. O the beautiful firs of my country! never should I have quitted you, had I had in my native village a mistress like Zoraid!

Zoraid. My dear friends, who amongst us has not a country to regret? Let us endeavour to think as little of this as possible. We have

been at work all the day without thinking any thing of it. Labour dispels care; it is a heavenly gift, but pleasure is one likewise. Now is the hour of enjoying ourselves: here are provisions; let each of you prepare them in the way she likes best.

Dalton. Were I in England, I would make you, with lemons and Barbadoes' rum, punch, that you would prefer to the best wine of France.

Rosa Alba. And I will make, with the juice of these pomegranates, sherbet as good as that of Naples.

Petrozema. And I will cool it in the snow brought to you from the top of the mountain; snow is pleasant to my eyes; it reminds me of my country. (*They all set about preparing sherbet.*)

Rosa Alba. Now I confess that the mere sight of snow makes me shudder; I should like the warm climate of Africa very much, if we were not in slavery. We are now in the month of January; observe how green these date-trees are. When the sun shines on their trunks, I would take them for the pillars of a temple, and when the moon covers them with her shade, and the sky is perceived through their tops, the illusion is such that you would say they bear palms and stars at the same time. I take a great deal of pleasure in hearing the quail and swallow sing

there, since they have come to pass the cold weather in this climate. Happy birds, you are strangers both to winter and to slavery; for my part I passed my infancy in a convent, and I am now a slave in a seraglio: in truth my good mistress, were it not for my affection to you, I would sooner be one of these warblers than what I am.

Zoraid. Although the snow covers my country at this season, it does not prevent the inhabitants from being happy there. This is the time that the French are accustomed to meet together to celebrate the feast of the kings. Let *us* also make a king's-cake; we shall give the fragments to some poor slave: the necessities of the poor are to be found in the superfluity of the rich.

Margaret. I shall now make you a cake in the fashion of my country, which will be better than the *couscousou* of Africa.

Rosa Alba. If Empsael comes, this feast will not be to his liking. He prefers rum to any kind of sherbet, and a tobacco-pipe to an orange flower. As to kings, he wishes none but himself to be king in his own house.

Zoraid. My husband does not interfere with our amusements; you are not aware of his good qualities. He has not the exterior of European politeness, but he never deceives any one. If he is terrible to those whom he considers to have

injured him, he is an ardent friend to whoever has acted an obliging part towards him; he is generous towards every innocent creature in a state of suffering; he would throw himself into the sea to save a child's life. His sympathetic feelings are strong, and if he has made choice of me for his spouse, in preference to so many women here who are superior to me, I owe that preference to my misfortunes.

Rosa Alba. A lover always takes after the object of his love; Empsael will become good, since he is fond of you.

Petrowna. Oh! love makes men generous, sincere, obliging. Every body would be good, if every body felt that passion.

Zoraid. Dear Neapolitan, while we are resting from our labours, sing us one of your country songs; you have a great facility in that way.

Rosa Alba. And do you think that one can sing when in captivity?

Petrowna. Birds sing well in a cage.

All. Come, sing, sing. (*Rosa Alba goes to the cottage to take a guitar.*)

Rosa Alba. I will sing you a song which I composed lately on seeing that cottage and these flags. My good Russian, while I play the guitar to accompany my voice, do you squeeze the juice of these pomegranates into this crystal vase.—
(*She sings.*)

Zoraid. Stop your singing, I hear sighs.—
(*She looks to the left of the hill.*) O God! these are human beings who suffer. Alas! these are male slaves, and we are not permitted to approach them. (*She goes with her women into the cottage. Don Ozorio, a Spanish slave, and Almiri, a black slave, carrying two baskets of stones, stop at the bottom of the hill. They lay down their burdens there, and Don Ozorio sits down, sighing.*)

Don Ozorio. They oblige us to build walls around the deep ditches, in which they enclose us during the night; my strength fails, I can go no farther.

Almiri. Master, give me your burden, I have strength enough to carry it along with my own.

Don Ozorio. Oh! let me here bring my life to a close. Even if fatigue did not overwhelm me, I should die of thirst: our barbarous conductors refuse to let us drink the water which they have at hand for mixing with their mortar.

Almiri (takes a calabash, and, having looked at it, says sighing:) Alas there is no more water.

Don Ozorio. It was our whole day's stock; you gave me the whole to drink.

Almiri. We may ask for some in this cottage.

Don Ozorio. It is inhabited by our tyrants, look at these flags.

Almiri. I heard singing there a little while

ago; persons who amuse themselves are in general well disposed.

Don Ozorio. Remember that this cottage belongs to Empsael, the most cruel enemy of the Christians. Would you have me ask water from one who thirsts for their blood! I would perish sooner.

Almiri. I am going to look for some.

Don Ozorio. Where will you find any in these sands?

Almiri. Perhaps towards the sea-side.

Don Ozorio. How can you expect to find any in these arid plains where there is not the least verdure?

Almiri. I hope to find it in a hollow; observe these birds flying thither at sun-set, observe likewise on the sand the footsteps of lions and tigers, who come thither from various parts of the desert.

Don Ozorio. O my intelligent companion! you continue to possess all your faculties of mind and body; for my part, mine are going fast; I have neither sight, reason, nor courage; none of my faculties were called into exercise in my infancy. I was taught no other reason than personal interest; and no courage but that of honour, that is, of my vanity. I have sometimes braved danger when sure of being applauded; but I have not been taught to resist any of those mischances which attack a man within or without every day

of his life, unknown to the public. How should I then be able to support a state of slavery? O Almiri, you have been at all times more fortunate than me.

Almiri. Rest here, my master, I am going to fetch you some water in my calabash.

Don Ozorio. And the wild beasts?

Almiri. They do not come abroad except at night.

Don Ozorio. And men, who are to be dreaded at all times! If our guides perceive you, they will think you are running away. I wish to share the danger with you.

Almiri. I beg it of you, master, allow me to go alone; it is best that I should suffer by myself.

Don Ozorio. Why do you always call me master? You cannot be the slave of a slave. Servitude has made us equal.

Almiri. We are not equal, since you are more unfortunate than me.

Don Ozorio. If any thing could confer rank among men, it would not be misfortune, it would be virtue; and it would be you, in that case, who would have a title to be master.

Almiri. You brought me up with so much kindness that I look on you as a father.

Don Ozorio. My faithful servant, in my adversity my chief regret is that I did not do to you, in the time of my prosperity, all the good

that I might ; in that case I should now die happy.

Almiri. Do not afflict yourself, my father ; you have not lost every thing ; you had a slave in me, and now you have a son. Let me run to fetch you some water.

Don Ozorio. Fortune has exercised all her severity on me ; I am of a noble family ; I was young and possessed of rank in my own country ; applauded by females, to whom I was in the habit of giving magnificent entertainments ; my lands, cultivated by my slaves, extended as far as the eye could reach, and were watered by streams which took their rise in my grounds. Now I am old, despised, stripped of every thing, in a barbarous country, without even the property of my person, and so tortured by thirst, that, if I were still a rich man, I would give all my possessions for a glass of water.

O strange reverse of destiny ! I had for slaves blacks of every country of Africa ; I was accustomed to rejoice them with a smile, or to make them tremble with a glance of my eye. Here, the negroes are all-powerful ; it is they who form the emperor's guard, and who fill the first offices of his court. Empsael, the first minister, is a black, and the emperor himself a mulatto. Empsael, the most cruel enemy of the Christians, is my master, and I, of the illustrious family of the

Ozorios, the ancient conquerors of America, am the slave of a negro, obliged to carry stones to raise the walls of the prison in which I am to be confined, perhaps to die of thirst at the door of his country house.

O death! come and finish my misfortunes. What, after all, is life? A succession of wants incessantly renewed; conflicts with Nature, with our enemies, with ourselves; an equilibrium which we are always on the point of losing; a feeble flame shaken by every wind, and which must be renewed every day. Let Nature run her course; let us die, death is but the repose of life. But an immortal life begins after death; a bad thought, a murmur, a simple omission, are there punished by dreadful torments. What a frightful abyss opens under my feet, and I am here without any assistance in the way of religion, in an infidel land. How shall I present myself, without being purified, to Him, in whose eyes even the just are not pure? Oh! existence is a feeble gift to man, since he dreads death so much. How many men are precipitated daily into perpetual punishment, because they are not acquainted with my religion!

But why should I speak of men precipitated into perpetual punishment? Does not my religion, with which, in my days of tyranny, I was

accustomed to alarm my captives, excite now fear in my breast, in my days of distress? O God! I acknowledge there thy justice, and I implore thy clemency; forgive me the evils which I have committed in thy name. Men have never reckoned, in the number of crimes, a want of humanity in behaviour to our inferiors; nor the taxes, which produce so much misery; nor war, which they adorn with distinction; nor slavery, which is sanctioned by ambition. Our laws punish an impropriety only in the case of individuals in humble life, while they pardon the crimes of kings, the sources of the misfortunes of the world. But there are some lowly virtues which are great in the face of God. If the slightest fault be punished by his justice, the slightest act of kindness will not go unrewarded by his goodness. If he has threatened with punishment the hard-hearted man who, in the midst of plenty, sees, with a dry eye, the evils of his fellow creatures, he has promised the sympathetic poor man a share in his happiness, as a reward for the gift of a glass of water. He will not leave unrecompensed the services of my faithful attendant. Almiri! at this moment you are perhaps the victim of some wild beast, or some barbarous overseer. I wish to share your dangers and die with you;—but here he comes; observe how quick he

runs. (*He rises to go to meet Almiri, but falls down, and exclaims :*) O death ! come and finish my misfortunes.

Almiri. Where were you going, my father ?

Don Ozorio. To your assistance, my son.

Almiri. I wanted none. Drink ; this water is as fresh as if it came down from Mount Atlas ; yet it was taken out of the midst of hot sands, near the sea.

Don Ozorio. O Providence ! this water must be excellent !

Almiri. I cannot tell you.

Don Ozorio. You have not then tasted it.

Almiri. How, would you have me taste it while you were suffering so much from thirst ?

Don Ozorio. You will drink then before me.

Almiri. Oh ! no.

Don Ozorio. Drink, I tell you.

Almiri. You distress me much ; drink, my master. (*Don Ozorio takes the calabash and drinks.*) I found above the spring a carob-tree, of which I gathered some fruits ; you may safely eat them, they are ripe. (*Don Ozorio takes the carobs, and gives him the calabash.*)

Don Ozorio. Now, drink in your turn.

Almiri. Drink again.

Don Ozorio. My thirst is quenched.

Almiri (*after having drunk*). There is still some for you ; this is a good calabash ; it is lucky.

When the corsair took our ship, his people plundered all our crew ; but they left me my calabash, which I held in my hand. I would not part with it for all the silver plate which they took from you.

Don Otorio. It has really been of great service to me. Splendour may soon attract the rage of fortune, but obscurity shelters us from her blows.

Almiri. You are in the right. I know a fable of my country to that effect, and would relate it to you if I could express myself with clearness.

Don Otorio. Relate it to me, I pray you ; your natural frankness pleases me greatly.

Almiri. There was in a tufted bush a bird with a red head and a green tail. When a bird of prey appeared, it escaped his eye by turning its tail towards him, and concealing its head in the bush. Yet it envied the fine red tail of the parrots, and was in the habit of saying, If mine be green, it is because it sees nothing but verdure ; if my head be red, it is because it sees the sun. It then sprang out of the bush to turn its tail to the sun, but a hawk having perceived the shining feathers of its head, flew upon it and plucked it.

Don Otorio. Your fable is replete with good sense ; you are right : I was rich enough, and

ought not to have ventured out of my country ; my great concern is that I should have made you follow my lot.

Almiri. I have lost nothing by being in your company ; I was unplumed when I came out of the egg. Take courage, my master, I had last night a good dream, which promises you liberty ; I saw the sun rise above your head and mine.

Don Ozorio. I am no longer an object of pity, I have a friend : rest beside me, you have been to fetch water for me, at the risk of your life, at the lions' spring ; I wish to go there myself. Tell me, how shall I find it out ?

Almiri. I will not let you go there ; the danger is too great ; I found first a flat rock, rising in the midst of the sand like a large tortoise ; it is quite covered with cactus and aloes ; at its summit rises an old carob-tree, laid by the wind, and which forms a parasol covering above the spring. On going under its dark shade, I found the skeleton of a large buffalo, the bones of which were half picked. I saw on the sand, marked by the lions' paws, locks of their manes, and I felt the rank smell of these terrible animals. I made haste to fill my calabash with one hand, while I gathered with the other some of the carobs which hung over my head ; all at once I heard a frightful roaring, and I fled as if pursued by all

the lions of the desert ; on returning, I perceived that this arose from the waves of the sea breaking on the rocks, and I could not help smiling at my terrors.

Don Ozorio. You make my hair stand on end.

Almiri. Let me speak tranquillity to your mind ; there are females in this cottage ; I thought that in coming up I heard their voices.

Don Ozorio. The voices of women ! these must then be Empsael's women ; let us go to a distance, for this spot is more dangerous than the lions' spring. In former days, when I lived in an unknown country, the mere sight of a female was to me an assurance of peace and hospitality. I was in the habit of approaching men with confidence when I saw females in their company ; but here it is considered a crime if you cast your eyes on the spot that they inhabit. The jealousy of man is more to be dreaded in Africa than the fury of lions ; but what is that troop that approaches ?

Almiri. These are the crew of our ship, whom they are leading away into slavery ; observe at their head Achmet, that wicked renegado who took us. Oh ! were he to find us here.

Don Ozorio. He comes from the sea-side ; let us fly in the direction of the forest ; let us fly, Almiri ; but what are you doing ? (*They rise up.*)

Almiri. I am taking charge of your burden along with my own ; your goodness has redoubled my strength.

Don Ozorio. Let God be your recompense. (*A corsair-captain comes forward, bearing a Spanish flag, and is followed by several slaves.*)

Hannibal. I have been called on for several men to serve in our corsairs of Tangiers and Sallee ; a carpenter and gunner are wanted ; where are those of the Spanish ship ?

Achmet. Here they are.

Hannibal. See if they are in good health ; make them walk and run. (*Achmet examines them, and makes them go and come, after which he says :*) Signior Hannibal, these are healthy and stout ; I warrant them to you ; you will be satisfied with them ; only take the precaution of separating them. As they are Spaniards, you will do well to couple them with Portuguese who are their good friends. (*They are separated.*)

One of the Slaves. We are Spaniards, do not put us along with the enemies of our nation.

Another slave. Do not separate me from my wife.

Achmet. Come on, come on.

Hannibal. Our black chancellor has applied to me for a white boy to serve him in the desert.

Achmet. I have got exactly what will suit him ; take away one of these boys from his

mother; the youngest is the one that you want; he will learn whatever you choose. (*The fetters are struck off from the youngest.*)

The Mother. * In God's name do not deprive me of my son.

The Elder Boy. Do not separate me from my brother.

The Younger. Oh my brother! oh my mother, my mother!

The Mother (in tears). My child, shall I then see you no more?

Achmet. Separate them directly; if you continue crying, we will take away your other boy.

The Mother. Oh my son, my dear son!

Achmet. Take away the other from her.

Hannibal. Do not prevent her from crying.

Achmet. Where is that black slave who used always to be along with his aged master? You know, Signior Hannibal, that Empsael never wishes a man of his colour to be in a state of slavery.

Hannibal. He is very right, the blacks are born free.

Achmet. The one you speak of can be at no great distance, I sent him off this morning beforehand, along with his old master, who is no longer able to walk, and who was put upon a camel's back.

Hannibal. They have both been put to labour

at the public works; they cannot consequently be far off.

Achmet. Let them be found out and separated; that is a point of consequence, Signior Hannibal; I know the whites; as soon as any kind of intimacy exists between two white slaves a plot takes place against their master. The way to govern them is to separate those that are attached to each other, and to put together those who bear each other a grudge. (*Zoraid trembling at the window of the cottage, Achmet bows respectfully to her.*) Madam, my master ordered me to place this new trophy in your residence. (*He turns towards the slaves.*) Come forward, and bow yourselves before this cottage of Empsael, which victory has covered with his flag.

Zoraid (trembling). Where is Empsael? When will he return?

Achmet. Madam, he is in the forest, he will return at night. (*To the slaves.*) Let us go lower down.

Zoraid. Take away the sherbet, my thirst is gone. My unfortunate friends, tender companions of my lot, leave me alone; the look of you redoubles my sufferings. Rosa Alba, give notice to Father de la Merci to come promptly.

Rosa Alba. Madam, I shall run to him.

Zoraid. And you, Margaret, make the Portuguese Jew come here.

Margaret. I expect him here immediately, Madam.

Zoraid. Wives separated from their husbands, mothers from their children, friends torn from their friends, remote from that native country which they are destined never again to see; abandoned to the fury of barbarians without consolation or assistance; these alas! are but a part of the evils of slavery. How much is this old man, born as he was in an elevated station, to be pitied? The greatness of our fall is unfortunately determined by that of our previous elevation; but what a noble disposition is discovered by the black who was formerly his slave! Ah! had Empsael but heard him; he is a warm admirer of generous actions. For the sake of the slave he would have acted a kind part to the master; he would have done so to all his unfortunate associates. I cannot venture to sooth them by myself; I dare not hold any communication with them. Empsael has a horror of Europeans. I must call to my assistance the Portuguese Jew and the good Father de la Merci, the bearer of the charitable contributions of Europe for the relief of the captives. I will give them the fruit of my savings. Let me go and find them. Oh God! send a blessing on my feeble contribution for such great wants. A grain of corn becomes productive only by thy blessing. (*She returns to her cottage.*)

(*Benezet, a quaker, appears on the sea-side, carrying plants in one hand, and a cane in the other ; he says:*) I believe it would be practicable to make the tour of the world on foot by keeping always along the sea-shore ; we meet there a succession of beautiful strands with rivulets and shell-fish ; this is enough to afford refreshment and to support life. It is in this manner that I have gone over a part of the desert shores of Europe and America, and that I am now, for the second time, on those of Africa ; Nature has provided in all directions for the wants of man, but I must add, that men every where make light of the blessings of Nature, and contrive to make each other very unhappy. In America, I left the blacks slaves to the whites ; in Africa, I find the whites slaves to the blacks.

This is the road to the deserted town where I am to make my first station ; no fear of my finding lodging enough in its abandoned towers. I shall be like the stork, which every year passes the winter in Africa, and makes its nest among barbarous tribes at the top of round monuments, and on a thatched roof among kind and hospitable nations. I see before me a cottage, but it is surrounded with flags ; it is the abode of Empsael. That black has naturally all the good qualities of his countrymen ; but the Europeans have perverted them by kindling in him a vindictive

spirit. Let us look for the good Africans in the interior of the country; but here comes a stranger.

Balabou. So you are here, Mr. Philosopher; I am very glad to see you; you gave me last year plants which did me a great deal of good.

Benezet. A vegetable diet and exercise cure a number of complaints.

Balabou. You come then to gather plants in our country?

Benezet. I come both to gather and to sow them.

Balabou. A good joke—to gather plants, as if your own country produced none. Your real object in coming so far is to look for treasures in the ruins of our deserted towns.

Benezet. My friend, it is very true, I have found a great treasure there.

Balabou. Where is it?

Benezet. It is along with me.

Balabou. You ought to share it with me.

Benezet. Very willingly.

Balabou (*holds up the lappet of his robe*).
Come, give it me.

Benezet. My treasure is peace of mind.

Balabou. A fine treasure truly! How do you manage to find this peace of mind in a solitude? for my part, I feel nothing there but disquietude and tedium.

Benezet. I find peace of mind in the study of Nature, and in confidence in God.

Balabou. How! you are a believer in God? Philosophers, they say, have no religion.

Benezet. My friend, all men worship some divinity, or at least some chimera which serves them instead of one. The most unfortunate are those who see in the universe no other God but themselves. These persons must lead a very dull life.

Balabou. How can you find means to worship God with the wandering life you lead? You do not frequent either a church, synagogue, or mosque; where is your temple? your book of law, your sacrifices, your altar, and your priest?

Benezet. My friend, my temple is that of Nature; the heavens are its vault; the sun is its lamp; my book of law is the love of God and man; my passions are my sacrifices; and my altar is my heart, of which God himself is high priest. Believe me, all the temples built by the hand of man are but feeble imitations of the one I mention.

Balabou. All these fine feelings will be of little use to you at the day of judgment, if you do not believe in our great prophet.

Benezet. I respect religion of every kind; leave me in possession of my own. Adieu; it is time to proceed on our journey. Here, Balabou, take this handful of tobacco, as a remembrance

of your friend Benezet. (*He gives him some tobacco.*)

Balabou. I thank you. Adieu, good philosopher; may heaven lead you to a knowledge of the truth.

Benezet. Adieu, (*on going away*) delightful solitude! it is only in your bosom that the soul enjoys the peace of Heaven.

Balabou (alone). The man who respects all religions has none; what a pity that this traveller should be out of his right path! He has evidently a great mind. He goes over all the world in quest of treasure, and perhaps has the assistance of the devil in his search; after all, it is better that he should reap the profit than another; he is the best kind of man that I know. He is fond of us; he has always something to give us; were he black I should call him a perfect creature, but all the whites of Europe are plunged in darkness and error. How in all the world has our great minister thought of marrying a woman of their country? She is good and charitable, but what use will that be of to him at a future day? Could I but succeed in making her a convert, I should, by her means, have a great deal of credit with her husband; she would soon make my fortune. Here is the spot where she is accustomed to come and pass the evening; I must

find an opportunity of speaking to her during Empsaël's absence.

Hannibal (comes up to Balabou respectfully, and kisses the lower part of his robe). Good evening, my father.

Balabou. Good evening my son; in what direction are you going?

Hannibal. I am going to send a detachment of negro guards towards the town, and I am now making my circuit along the sea-side. These confounded whites give us a great deal of trouble.

Balabou. In what respect? Have you seen any European ship of war on the coast?

Hannibal. No, they are not bold enough to come; I complain only of our white slaves; this morning they sent us one belonging to the Spanish prize; he was forthwith put to labour on the works, and disappeared this afternoon. He is followed by a black, who they say is a slave, and never quits him; I have given notice of all this to our renegado Achmet.

Balabou. Nothing is so deceitful as these whites.

Hannibal. This one I am told is a gentleman; what is meant by a gentleman in Europe?

Balabou. Gentlemen in Europe are men of a cast who perform no labour, and who hardly trouble themselves with business of any kind.

Hannibal. At that rate I should think them on the high road to starvation.

Balabou. So far from it, it is they who have the chief wealth and the greatest places.

Hannibal. The other whites are then their slaves?

Balabou. Yes, they are made likewise for slavery; you know, my son, that the kinder we are to them, the greater the abuse they make of it.

Hannibal. It is Zoraid who is the cause of the disorders that take place among our slaves; every day she obtains for them some new favours from Empsael. I cannot conceive why our great general married a wife of that colour; she must, I think, have gained him over by some magical charm. Our black women are prettier, better made, more discreet, more lively, and withal more submissive to their husbands than the white.

Balabou. We must not despise Zoraid because she is white: God has given a soul to her as well as to you and me.

Hannibal. I do not despise her on that account; that she is our general's wife is enough for me to respect her. At the same time I cannot help asking how he has had so little taste. We often see whites become enamoured of black women; but very seldom a black enamoured of white women.

Balabou. You are right ; black is the natural colour of man and woman ; it is the sun that gives it, and it is never effaced. White on the other hand is a sickly colour, which is kept up only in the shade ; all the whites of Europe have effeminate countenances.

Hannibal. I have often laughed on seeing them disembark from their country ; some had on their head great locks of hair not their own ; they had covered them with hair-powder, hogs'-lard, and with a black hat with three corners. I stripped a European once in a ship which we took, and I found in his clothes, from head to foot, twenty-seven different pieces of dress, fifty two buttons,*six buckles, and ten pockets, filled with a dozen of things all necessary to them. They were obliged to put on this mass of clothing every morning, and to take it off every night. The blacks, on the other hand, with a piece of cloth around the middle, a lance in the hand, and scimitar at the side, are prepared for every thing in peace as in war. All this shows that the whites were destined to be their servants.

Balabou. The face of an African is the face of a warrior ; wounds do not frighten a black. By way of accustoming them to them, they are marked with scars from their infancy ; they go without fear to the point of the sword and to death.

Hannibal. We have in all respects the advantage of the whites. We ride without saddle or stirrup; we are swifter in the course; stronger in personal struggle; more dexterous in swimming, in hunting, and in fishing; but how does it happen that the negro who ran off with the white should be his slave? Is there any part of the world in which the blacks are slaves to the white?

Balabou. Yes, my son.

Hannibal. And how is it possible that the whites can get the better of the blacks?

Balabou. It is because they have recourse to magic.

Hannibal. Is that possible?

Balabou. Yes, they have an understanding with the devil.

Hannibal. I had heard as much from my companions.

Balabou. You may depend on it as true. It was the devil who taught them the use of gunpowder, and we hardly ever make prize of a European vessel, without finding some new diabolical invention. At one time it is fire preserved in a flaggon of water, and which becomes inflamed as soon as the air is let in; at another time, it is glasses which bring down the fire from the sun. At the time I was studying at Fez; they brought there, in a machine taken on board

an English vessel, a glass ball which threw out sparks, and gave a shock without our being able to see whence the blow proceeded ; but what was still more strange, it made lightning come down from the sky. There was an order from our doctors to throw it into the sea, and to send away to the desert the slave who had made the experiment. But the end of all these devices of the whites to manage fire will be their landing some day in the fire of the lower regions.

Hannibal. With so much assistance from the devil, they ought to make an end of all the blacks.

Balabou. They can do nothing against the true Mussulmen ; this is a privilege given by God to the true disciples of his prophet.

Hannibal. In what manner do the whites learn magic ?

Balabou. By means of books.

Hannibal. What is a book ?

Balabou. Here is one ; it contains the secrets of their enchantments. Their priests understand all this, and explain it to the people.

Hannibal. I wish I were able to read it.

Balabou. How ! Would you wish to make any progress in their diabolical sciences ? Be assured that they will carry them into a place of lasting punishment ; but we have books of greater efficacy, which will lead us into paradise.

(Father de la Merci comes to meet Zoraid, followed by Rosa Alba, Margaret, and Jacob the Jew.)

Zoraid. Signior Jacob, I have begged of you to pass this way, that you might assist me in affording relief to some unfortunate slaves.

Jacob. My greatest pleasure is in making people happy. It was I who sold lately two handsome Georgians for the Emperor's seraglio; they have at present the honour to be in the service of his black women, and in their own country they had not bread to eat. I intend soon making a tour through a part of Europe, and bringing from it a number of slaves; in Russia, in Poland, and in Livonia, I expect to find peasants accustomed to be cudgelled, and who may consequently be got cheap; from thence I mean to go into Italy, where, particularly at Rome and Naples, there are a number of poor people who will rather sell their children to me than have them mutilated to be made musicians. Could I but make my way to Spain and Portugal, I would bring you from thence slaves the most unhappy and the most submissive that there are in the world.

Zoraid. The question is not about procuring new slaves, but about assisting those who are now here.

Jacob. I perceive, Madam, your great good-

ness, and shall be happy to bear a part in so benevolent a work. Is it your wish to buy them off, or to exchange them? I ask nothing for my trouble; you have merely to speak. Every thing may be done by means of money; it is more powerful than beauty itself: to make it is the object of life.

Zoraid. You know that Empsaël never sells any of his slaves.

Jacob. I know likewise, Madam, that nobody has greater power over him than you; you can tell him there is no kind of trade more pleasant or more noble than the slave trade; dealers in horses, camels, elephants, gold, silver, precious stones, are not fit to be compared to dealers in men; for what is superior to the human species?

Zoraid. I cannot help saying that it is a frightful and inhuman traffic. To sell one's equal is to trespass against all the laws of Nature.

Jacob. Such morality may be good for private persons, but as a rule in politics it is worth nothing. Could Africa support itself without European slaves? The most flourishing towns, such as Algiers, Tunis, Tetuan, Sallee, and others, would then perish for want.

Zoraid. The present question is to give assistance to the unfortunate captives who have just arrived, and who are not yet accustomed to their sufferings. You possess Empsaël's con-

fidence ; you can go freely into the prisons of the slaves, and give to those that are most in want, mattresses, linen, and a little wine.

Jacob. What you now ask is a very difficult matter, and will cost a great deal. You know Empsaël desires that strict order should be observed in the place where the slaves are ; it would be necessary that I should first make sure of the negro guards, and above all that I should avoid the jealousy natural to Europeans, a thing almost impossible. If we give refreshments to one, we must give them to all. English, French, Portuguese, Italians, and even persons of the same nation, bear a mortal hatred to each other ; some on account of religion, others for their nation, others for their birth or their trade. To give alms to a slave in the midst of his companions would be like throwing a bone in the midst of a pack of dogs.

Zoraid. *At least I should like you to give assistance to a black and a white who appear inseparably attached to each other.

Jacob. That indeed is a rare thing, and what I have never seen. I will assist them, Madam ; how much do you wish to give them.

Zoraid. I have no more money ; but here is a gold box ; sell it, and distribute its price among them.

Jacob. I am a strictly honest man, and would

not take a farthing wrongfully, I am now to tell you conscientiously the weight of your gold box. (*He takes a pair of scales out of his pocket, weighs the box, and touches it afterwards with a stone.*) Your box weighs three ounces, two penny weights, and six grains; it is gold of twenty-two carats, and in fact it is a matter of no great value. You know that, since the return of the caravan from Tombuctoo and Gago, gold is much fallen here; it is at present almost as plentiful as silver; but you have diamonds and pearls which you never wear.

Zoraid. These are presents from my husband; I cannot dispose of them; what I now give you arises from my own labour.

Jacob. Of what religion is this white? If he is a Lutheran, Calvinist, or of any protestant sect, I will assist him very willingly; but if he is a catholic, I will do nothing in the matter. I am a native of Portugal, where the inquisition, after stripping me of all my property, put me in prison, and I assure you I had a great deal of trouble to get out of it. I would not part with a date to save the life of a catholic; but as for the black, he shall feel the good effect of your kindness; I shall take care that at night he have a good mat, and during day as much water as he likes to drink.

Zoraid. Add to this a little wine, that his aged

master, to whom he is so much attached, may not suffer the want of it.

Jacob. You know that the law of Mahomet does not permit the use of wine.

Zoraid. The catholic priest will then take care of the white prisoner, and the Jew of the black. Still this does not satisfy me. I wish to do something more effectual in favour of these two unfortunate slaves, and the crew of this Spanish vessel. I will go myself in quest of Empsaël.

Rosa Alba. What! into the forest?

All together. Into the forest?

Rosa Alba. Madam, do you know that there is there a town without any other inhabitants than lions? Januario, who often follows his master to the chase, says that it is a dreadful thing to see these large places full of old trees surrounded with palaces, where you hear in different directions the roaring of wild beasts.

Zoraid. I shall not be afraid when beside Empsaël.

Rosa Alba. It is there that we see the tomb of Mentia, from which voices issue from time to time, and whose ghost appears quite pale at night-fall.

Zoraid. I like the sight of a tomb which contains venerable ashes. It gives me an image of eternal peace.

Rosa Alba. Empsael will come home at night-fall at the latest; you can speak to him to-morrow.

Zoraid. But can a sufferer put off his sufferings until to-morrow?

Rosa Alba. Madam, night is coming on; it would be dangerous for you to remain longer here.

Zoraid. My dear friends, it is not necessary that you should accompany me; remain here.

Rosa Alba. Oh no, we will follow you wherever you go.

Zoraid. Prepare carriages for us to go in quest of Empsael.

Hannibal. There would be too great risk in this; the day is drawing to a close; if any thing were to happen to you, Empsael would hold me accountable.

Zoraid. It is I who will be accountable.

Hannibal. If there is any thing urgent, I can go thither myself. Under the favour of our great prophet, I have nothing to fear; give me your orders.

Zoraid. I cannot entrust any body but myself with my commission; do what I desire you.

Hannibal. Empsael directed me to obey you in every thing: what carriage, Madam, do you please to have?

Zoraid. The most expeditious.

Hannibal. The palanquin is the easiest and most secure. What slaves do you choose for bearers? The French are quickest, Germans strongest, Spaniards have a firmer footing, but they are slower, I should quicken them however.

Zoraid. I would rather go thither on foot than be carried by my equals. Oh God! in what manner is man treated by man.

Hannibal. Your slaves are not men; they are whites, they are infidels.

Rosa Alba. Have you not dromedaries at command.

Hannibal. Are you aware that these dromedaries are Arabians, and there is not one of them who is not worth as much money as four European slaves?

Zoraid. O unfortunate consequence of slavery!

Hannibal. Do not distress yourself, Madam; I am going to get the dromedaries ready. (*On going out he meets Balabou; he kisses the hem of his robe, and says to him,*) Speak to her without delay, she is going out in quest of Empsael.

Zoraid. What would you have me do, my good Morabite.

Balabou. Madam, I come for the purpose of converting you.

Rosa Alba. Do you mean that my mistress is in the wrong path? Learn, Balabou, that she is good and beneficent?

Balabou. Yes, but with all her goodness she is in the way of error.

Zoraid. How must I act to be converted ?

Balabou. You must believe all that I tell on the part of our great prophet.

Zoraid. But believing does not depend on me.

Balabou. Hold, take this little paper ; carry it night and day in your breast ; there is in it a passage of the Koran which will penetrate into your soul, and thence into that of the females who attend you.

Zoraid. What good will result to you from it ?

Balabou. Nothing is so excellent as the Koran ; the Sultana Zobeid, mother of the Caliph Amin, had a hundred slave girls who all knew the Koran by heart ; and recited the tenth part of it every day, so that they heard in her palace a continual humming like that of bees.*

Rosa Alba. What a pretty advice you give us to learn to hum over the Koran !

Zoraid. I have learned to pray to God from my heart, and not from my lips.

Balabou. By learning the Koran you will increase your influence over Empsael ; you will become like the Christian Mentia, the wife of the Cherif Mahamed, who, after becoming a convert to the Mussulman doctrine, attained so great an empire over her husband, as to make

* See the Bibliotheque Orientale of Herbelot.

him set all her relations at liberty, and almost go distracted with sorrow at her death.* You will see her tomb at the entrance of the City of the Lions; she performs miracles there daily, and offerings are brought thither from all quarters.

Rosa Alba. Yet she died a Christian in her heart.

Balabou. So say the Christians; but I am certain she died a Mahometan, since she performs miracles.

Zoraid. My loss would be of very little consequence; God forbid that it should ever affect Empsael's mind.

Balabou. He has a very powerful mind, Madam; I have a favour to ask you to obtain of him.

Zoraid. What is that?

Balabou. That he would build me a hermitage near the tomb of Mentia for the purpose of collecting the offerings; people bring there daily provisions which are lost.

Zoraid. These provisions are of use perhaps to poor travellers, or to necessitous slaves; the offerings made on the tomb of virtue ought to belong to the unfortunate.

Hannibal. Madam, the dromedaries are ready, make haste, I pray you, to set out before it gets dark.

* See Marmol's description of Africa.

Zoraid (to Balabou). Adieu, good Morabite ; I will be of use to you one way or another. (*To her women*) Let us go and endeavour to work on Empsael's sympathy : my dear friends, support my weakness, and let us increase our confidence in God in proportion to the opposition we experience at the hand of man.

After this conversation, Zoraid, leaving Balabou, mounted on a dromedary and surrounded by her guards and women, proceeded on the road towards the City of the Lions ; she soon arrived at a defile near the Atlas ridge, covered with palm and jugube trees, which form a very picturesque contrast with the lofty rocks of the mountain planted with cedars and firs. A number of torrents descend from the summits of Mount Atlas, and are precipitated into the midst of the valley ; but after advancing a little, one perceives all at once, across colonnades of palm trees, the ruins of an immense city, its aqueducts, its ramparts, and its palaces worn down by time, or overturned by the hand of man. It was in this spot that Zoraid expected to find Empsael. She prepared his tent, and took her seat at the bottom of a large tower on which she read the inscription " CAIUS CÆSAR " half effaced, but another monument soon attracted her eye, and made her melt

into tears. She perceived a tomb with cypress and aloes, with this epitaph in gothic letters :

Donna Mentia de Monroy, wife of Cherif Mahamed
in the year of Christ 1537.

At the sight of the tomb of a woman who had done so much good to persons in a state of slavery, she remembered old Ozorio and his negro attendant. This made her say to her women,

Dear companions, do not forget that the name of the old Spanish slave is Pedro Ozorio.

All. Yes, Madam, Pedro Ozorio.

Zoraid. Now that he is returned to the common receptacle, it would be a difficult thing to find him among the other slaves were we to forget his name.

Rosa Alba. Madam, do not go farther ; here is the Devil's Tower as it is called, which we see from the camp. Januario has told me that this was the rendezvous of the hunting parties.

Zoraid. This is Cæsar's tower ; I do not see Empsael.

Rosa Alba. Madam, were you to go farther, you would be frightened ; we are at the entrance of the forest, and of what is called the City of the Lions.

Dalton. Towns ruined and abandoned to wild beasts are to be found only in the countries where slavery prevails ; Asia, Africa, Greece, and

Italy are full of them ; but in England you do not find even a village without inhabitants.

Zoraid. Where are we likely to meet with Empsacl ?

Dalton. I shall endeavour to find him out.

Zoraid. Do not ascend that tower ; there may be serpents there.

All. Do not, do not, we entreat you, go up into the tower.

Dalton. I wish to relieve you from anxiety. *(She goes up to the tower, and looks through a window.)*

Zoraid. Do you not perceive any one engaged in hunting ?

Dalton. Madam, I see large amphitheatres in ruins, which are still conspicuous above the forest ; on one side a palace, of which the front only remains ; public squares as far as the eye can reach, all filled with old trees. I perceive amidst their trunks long avenues of colonnades half overturned, and churches without roofs or steeples ; what a scene of desolation ?

Zoraid. Come down, Dalton, I entreat you.

Dalton. I see something in the midst of an amphitheatre ! it is an elephant.

All. An elephant ! *(They collect around Zoraid.)*

Zoraid. Do you not hear a huntsman's horn ?

Petrowna. I hear a lion roar.

Dalton. No, it is the noise of a distant torrent. (*She comes down.*)

Rosa Alba. In truth, Madam, we should do better to return home.

Zoraid. I begin to be uneasy for Empsael.

Rosa Alba. The chase has no doubt led him in a different direction ; we shall do well, Madam, to return to the camp.

Zoraid. What is this small tomb covered with cypress, and surmounted by a cross ?

Margaret. It is the tomb of Mentia, the illustrious Portuguese, the wife of Cheriff Mahamed. Here is ~~her~~ her epitaph.

Zoraid. What ! the tomb of that unfortunate Mentia of whom I have so often heard ? See here coronets which have been suspended at it ; repeat her history to me ; I thought it was a fiction.

Margaret. Madam, her history is as follows. The Cheriff Mahamed, having settled in the valley adjoining Tarudent, when it was inhabited only by lions, planted sugar canes there, and made the whole country, as well as that canton, very flourishing. Having, in 1536, taken from the Portuguese the neighbouring city of Santa Cruz, called at present Cap d'Aguer, with the governor Guttieres de Monroy and all his family, he became deeply enamoured of his daughter Mentia. Mentia long refused to make a return

to his addresses ; but at last the desire of obtaining liberty for her father made her listen to him, and she became his wife.*

Rosa Alba. She acted very properly.

Margaret. Cheriff Mahamed allowed her to live in the manner of her own country, taking a pleasure in seeing her dress in the Spanish style, and in making her be waited on like a queen. Some time after she died in child-birth, of her first child, or, as others say, poisoned, in consequence of the jealousy of the other wives of the cheriff. Her husband went almost out of his mind. He set at liberty all her relations, who had refused to quit her, and whom he loaded with favours ; and finally, he raised a tomb for her in this spot, in which she had taken much pleasure. He was in the habit of sending thither, twice a day, a Moorish woman who had been much attached to her, and who brought thither both provisions and affectionate letters, to which the woman declared she received answers in Mentia's tone of voice. This had some effect in calming the despair of Mahamed ; but it continued a long time : for even after conquering Fez and Morocco, and after having progeny by his other wives, he was still much affected on thinking of the loss of his dear Mentia. Since that

* See Marmol's history of the Cheriffs.

time, poor slaves, and the unfortunate of all nations, are in the habit of bringing provisions and even coronets to her tomb.

Zoraid. The tomb of Mentia comforts me more than the tower of Cæsar. It seems as if some heavenly being were reposing there; I am now no longer afraid.

Margaret. It is said that Mentia still answers the unfortunate persons who consult her, and that her shade appears to them sometimes at night, clothed in white.

Dalton. I will go and speak to her.

Rosa Alba. By St. Januarius! she has only to appear; do not speak to her.

Dalton. And even if she were to appear? Who does not fear death needs not fear the dead; I will go and speak to her.

Margaret. Zoraid, do you rather speak to her yourself; if she will answer any one, it will be you, who are good like herself.

Zoraid. My dear friends, we are feeble mortals, subject to the control of Heaven; superior beings are not at our command; we must not attempt to address them. Yet I will willingly offer in your name, and my own, a gift and prayers at the tomb of Mentia. (*She takes off her necklace, and kneels with her women beside the tomb.*) Virtuous Mentia, receive our homage; if beneficent minds in another world still take an

interest in the misfortunes of this, assist our plans in favour of our unfortunate companions in slavery; receive this necklace, worked by my hand, and of the favourite colour of Empsaël; give me as much influence for the relief of poor slaves, as you had with Cheriff Mahamed. If you assist us, I will adorn your tomb with the finest flowers of Europe; I will plant there primroses and violets; once a-year I will distribute, in your name, provisions to the unhappy. Receive the prayers of those who venerate your memory.

Rosa Alba. Oh! power of virtue! I feel myself protected by this tomb. I believe that were I even to see the shade of Mentia appear, I should not be afraid of it. (*Empsaël appears with a lion's skin in his hand.*)

Empsaël. What! is it *you*, timid Zoraid? What pressing cause brings you at this hour into this gloomy forest?

Zoraid. My lord, if I may venture to say so, it was the uneasiness I felt at your absence.

Empsaël. I was here, dear Zoraid, at break of day, when one of the oldest lions, who issue from the summits of Atlas, returning to his den, sprung upon me; but I slew him, and here are his spoils; his sides, black and smooth like those of the bear, shall protect your delicate feet from the rude cold of the mountain. I have likewise

had the satisfaction of learning that one of my corsairs has captured a large Spanish vessel ; I have given orders to lay her flag at your feet, and to add her crew to the number of your slaves. In spring I hope to prepare still more serious blows for the infidels, and to give you fresh proofs of my affection.

Zoraid. My lord, may victory and pleasure mark your happy days ; may I, your faithful slave, continue agreeable to your eyes.

Empsael. It is a pleasure to me to think that I triumph only for you. *Zoraid*, I wish to make you tread under foot the pride of the infidels. In future I wish to have, in your apartments, no other carpeting than European flags.

Zoraid. My lord, so much honour is not suitable to a poor slave.

Empsael. *Zoraid*, you are no slave ; you are my wife ; but what do I see ?—You have been weeping ; it is in vain that you try to conceal it ; what is the cause of your tears ?

Zoraid. It is not a cause that would be interesting to you.

Empsael. I pray you, tell me what it is ; have any of your slaves been wanting in respect ? You are too good to them ; I wish to give you some out of every nation in Europe ; the more different they are from each other, the easier it will be to keep them in order.

Zoraid. My companions not only obey, but they anticipate my wishes.

Empsael. Yet you have been in tears. *Zoraid*, you conceal things from me, who never keep any thing secret from you.

Zoraid. My lord, if I may say so to you, I have been weeping from compassion.

Empsael. And for whom.

Zoraid. For this same Spanish crew whom you have sent me, but particularly for two slaves.

Empsael. Why have these two slaves excited your pity more than the others?

Zoraid. Because they are in deep distress; had you, my lord, heard their conversation, your generous soul would have been affected by it.

Empsael. What! by the conversation of two Europeans? An innocent mind is not alive to their perfidy; they sometimes speak fair, but their deeds are always dark.

Zoraid. One of the slaves was a black.

Empsael. Oh! on the part of a black I can believe what you say; it is the blacks alone who are sincere and generous.

Zoraid. This black was accompanied by a white man advanced in years, and sinking under a burden.

Empsael. Had I my wish, I would not hesitate to put an African rock on the head of each European, and crush him with its weight.

Zoraid. My lord, the black had formerly been slave to the white. He went alone to fetch him water at the lions' spring, because he was parched with thirst, and he afterwards took charge of his burden as well as his own.

Empsael. He gives life to a serpent, who will return it by stinging him.

Zoraid. Oh Empsael! your magnanimous soul would have been melted at the words of this black to his former master.

Empsael. To his former master? My dear Zoraid, you are too much alive to the sufferings of Europeans; you do not know what they have made me undergo; listen, and dismiss your pity for them.

I was not born on the steps of the throne of our invincible emperor, as the palm grows on the trunk of the palm-tree: I have not lived, like you, the object of a thousand attentions; I attained fortune only by painful exertion, and greatness by encountering a series of outrage. The cause of my misfortunes, Zoraid, is my colour. Your countrymen, who, on seeing you, feel mild and obliging impressions because you are fair, experience, on seeing me, sentiments of contempt and hatred because I am black. The only reason of this is the colour of my skin; for had you, Zoraid, been black like me, they would have hated you, good as you are; and had I been

white like them, they would have esteemed me on account of the resemblance, had I even been a traitor. Yet Nature has given my colour to the half of mankind: almost all the inhabitants of Africa and of her islands are black. Nature has given to blacks the same wants and the same title to liberty as to whites; along with a richer soil, a fairer sky, a heart more generous, and on that account more easily deceived. You know my misfortunes, and particularly the name of the harsh Ozorio, who held me in chains.

Zoraid. Ozorio:—That is the name of the old slave! Great God! protect this unfortunate creature.

Empsael. So long as the lions roar in the forests, my heart shall beat for vengeance.

Zoraid. Noble victim of the cruelty of Europeans, your hatred towards them is but too well founded; but do you not apprehend that, in punishing them all for your past misfortunes, you may confound the innocent with the guilty.

Empsael. According to their example, *Zoraid*;—what do I say? according to their example? No negro ever injured them, and yet they devote every black to slavery. Millions of my countrymen have experienced from them the same treatment that I did; my injuries are those of Africa at large.

Zoraid. If I may be permitted to say so, my

lord, this white slave, of whom I spoke to you, has done good to the men of your country ; at least if I may judge from the black slave who remains so much attached to him in his misfortunes. O Empsaël, by the love I bear you——

Empsaël (out of temper). Zoraid, your love should not lead you to desire any thing but what I wish.

Zoraid. In the name of the love that you yourself bear me, my lord ! Beauty is transient ; and one day, when these features exist no more, you will cherish Zoraid only for the remembrance of her virtue. One day you yourself, when drawing near to the close of life, and recalling your glorious career, will fix your recollection much less on the resemblance of your successes than on that of your good actions. A traveller, at the end of his journey, thinks with much less pleasure of the pillars raised in the desert, than of the wells that have afforded him refreshment.

Empsaël. You overcome me, Zoraid. Guards, call hither the commander of my slaves.

Zoraid. May you not be the Ozorio of whom my husband spoke !

Empsaël. My dear partner, all that falls from you sinks into my mind ; your words are for me what a rivulet, descending from the snow of Atlas, is to the traveller who has lost his way in the deserts of Zaara. When I found you, while

yet a child, on board a French ship of war which I took by boarding, on the coast of America, your alarm excited my pity, and your innocence claimed my protection. I encouraged you while I held you in my arms, and I took a pleasure in raising you on my knees. As you grew up, I felt my affection for you increase, I recollect that, when you were yet very young, one of my officers presuming to refuse to obey me, I struck him down with a blow of my scimitar. I was going to inflict another blow, when you turned towards me with eyes filled with tears; I forgave his crime at the sight of innocence in alarm. After that time, having learned that you were an orphan; that your property was confiscated in your own country on account of your religion; and that, flying from home, you were in quest of an asylum in Canada, beside an unfortunate relation, your sufferings reminded me of my own, and redoubled my affection for you. I said to myself, I will be to you as a mother, a father, a protector. I gave you my hand, and since you became my wife, your power over me increases daily; your beauty drives away tedium from me, and your unalterable mildness disarms my rage. You make me forget the heart-rending events of my past life, the loss of my country, and of my parents: you supply to me the place of all. To deserve your love, I would, were it necessary,

go alone amidst serpents and tigers ; I would go in the midst of barbarous Spaniards.

Zoraid. My lord, I am much affected with your goodness. Oh ! how I dread the arrival of Ozorio !——*Empsael* !

Empsael. My queen ! what do you want.

Zoraid. Promise me when you look at this slave to calm your first emotions.

Empsael. My dearest love, I promise it.

Zoraid. You will speak to him without anger ; for he is a European.

Empsael. Even with kindness, on your account, my *Zoraid* ; with kindness.

Zoraid. But if he were a Spaniard ?

Empsael. Still I will speak to him without anger.

Zoraid. Do not allow him to be injured ; remember that he has acted a kind part to one of your countrymen.

Empsael. I shall recollect that you wish me to act a kind part to him ; the bird under its mother's wing is not more sacred in my eye than the unfortunate when they excite your compassion.

Zoraid. But if——(*she stops.*)

(*Achmet comes forward respectfully.*)

Empsael. Have you not observed among my lately arrived slaves a black and a white who are always together ?

Achmet. Yes, my lord.

Empsael. Go and bring them here.

Achmet. They arrived this morning in the Spanish prize, and they have run away this afternoon.

Empsael (angry). Run away, do you say?

Achmet. My lord, they were seen to leave the camp where they were at work, and to proceed to the cottage where your lady was, and all subsequent search for them has yet been in vain. Hannibal has sent soldiers after them in every direction, and has been in quest of them himself; that they have run off is certain.

Hannibal. My lord, it must be so, unless they have rendered themselves invisible by dint of magic.

Empsael (to Zoraid). How, Madam! you favour the flight of a Spaniard, and you next entreat me for favours to him.

Zoraid. My lord, I swear to you that I have in no respect contributed to his flight.

Empsael. You are perpetually soliciting me in behalf of these perfidious slaves; I always find your inclination in opposition to my will. I will bestow my affection on hearts more alive to my victories;—Madam, withdraw.

Zoraid. My lord!

Empsael. You protect those who would tyrannize over me; retire, and curses on your head.

(Zoraid retires weeping.)

Empsael (to Achmet). Let us make the usual signals for the escape of slaves; let us watch carefully the avenues of the mountains and the sea-shores; untie the dogs around the camp; my slaves must be found, or I will put you in chains; ah Zoraid! torment of my life!

Achmet. My lord, if you will permit me to say so, nothing makes slaves so audacious as the protection of their mistress; ever since they knew that Zoraid takes an interest in them, they are very difficult to manage. Without my vigilance there would by this time have been an insurrection among them.

Empsael. I shall take care to put these things on a proper footing. Night is coming on; it is time to finish our chase. Mine of to-day has on the whole been unlucky; I have killed a lion, and have lost a Spanish slave and a negro.

Achmet. They will not go far; if they have fled into the forest their bones only will be found by to-morrow morning; the poor black is most to be pitied.

Empsael. Did Zoraid go away with a guard?

Achmet. No, my lord.

Empsael (with uneasiness). At this hour and in such a place, to go off without a guard! Go and tell my brave black horsemen to accompany Zoraid to the camp. (*Empsael calls him back*). Tell them not to go farther away from her than

the length of their lances ; go, run and tell them to bring along with them four of my mountain dogs which are accustomed to contend with lions.

Achmet. Yes, my lord. .

Empsael. To go without an escort at such an hour ! she was in great terror ; tell her that I shall soon come to see her.

Achmet. I shall not fail, my lord.

Empsael. No, no, I must accompany her myself to some distance from the forest. Tell them to bring me my Arabian horse ; let them take up the toils, the nets, the stakes ; let them collect the dogs and the slaves ; do not go to a distance, but return here. I shall come back immediately ; you shall be answerable for that Spaniard on your head. (*He goes out. Jacob and Father Jeronimo come to the foot of the tower.*)

Jacob. Let us stop here ; it is near this tower that Empsael is expected. I fear you may be fatigued with your journey ; yet I ordered them to give you the gentlest of my horses : it is the one on which I generally ride myself.

Father Jeronimo. Signior, I am surprised at your goodness towards a poor stranger like myself.

Jacob. Is it long since you left Italy ?

Father Jeronimo. I left Leghorn about six weeks ago.

Jacob. Had you bad weather on your passage?

Father Jeronimo. Yes: tempests sufficient to make one's hair stand on end; I escaped from them only by a miracle.

Jacob. I admire greatly your charitable disposition, which leads you to encounter so many dangers to accomplish the delivery of your brethren; there is nothing I would not do to oblige you.

Father Jeronimo. Signior, I am impressed with deep gratitude for your conduct.

Jacob. There is no occasion for it; it is with me a consequence of an attachment to the persons who are members of your religious order; and I wish to prove it to you by serving you for nothing.

Father Jeronimo. You will do in that a very charitable act, for I am a priest and a very poor one; our subsistence arises only from charity.

Jacob. One of the first services I wish to render you is to give you good advice.

Father Jeronimo. Good advice is of great importance.

Jacob. I wish to speak to you without reserve; but you will not make an improper use of it.

Father Jeronimo. Signior, I am incapable of it.

Jacob. You promise me secrecy.

Father Jeronimo. I swear to you under the seal of confession.

Jacob. I will tell you then, that the court is filled with avarice and corruption ; distrust every body in this country, whether Turks, Moors, or negroes ; all, even to your European merchants and consuls, are knaves.

Father Jeronimo. I had heard as much.

Jacob. Did you bring with you property to any extent ?

Father Jeronimo. I embarked nothing with me but what was strictly necessary, along with presents for the emperor and his minister ; my funds are very limited for the extent of my mission ; they should come to me through the medium of Leghorn Jews.

Jacob. Your friends will do well not to make remittances to your merchants or your consuls ; for they make use of them in trade, and never give the poor slaves either the money or the letters sent them by their relations.* Put your confidence in Jews ; for, notwithstanding the bad character given them by the Christians in Europe, they themselves allow that they do not leave any of their brethren here in slavery, that none of them has occasion to beg for bread, and

* See the Account of the Captivity of M. Mouette, Chap. XVII.

that, if any of their merchants are ruined, they subscribe and make up a new stock for him to begin business again.*

Father Jeronimo. Charity is of every communion; it is greater than faith, says St. Paul.

Jacob. What do your presents for the Emperor consist of?

Father Jeronimo. As he is in years, and as old princes are apt to think time long——

Jacob. To think time long? good, good.

Father Jeronimo (in a gay strain). To think time long, and to count the hours, we thought a clock would amuse him.

Jacob. A capital thought.

Father Jeronimo. In consequence we bought him one which marks time all the way from seconds to centuries.

Jacob. Ah! that is an admirable present.

Father Jeronimo. It is a magnificent present; we have got his victories painted by a priest of our order, one of the most famous painters of Italy.

Jacob. His victories! He will see that with great pleasure.

Father Jeronimo. You think he will?

Jacob. Nothing is more certain.

* See the Account of the Captivity of M. Mouette, Chap. XVII.

Father Jeronimo. It was I who suggested that.

Jacob. It is the suggestion of a man of great judgment, and well acquainted with the court.

Father Jeronimo. To these presents we added several portraits.

Jacob. How! do you not know that his religion prevents him from having figures in his palace.

Father Jeronimo. How is that?

Jacob. It would be accounted idolatry. What are these portraits?

Father Jeronimo. They are those of several crowned heads of Europe.

Jacob. Very few of them in truth deserve to be idolized; most of them are the terror of mankind.

Father Jeronimo. There is the portrait of Louis XIV. on foot.

Jacob. That will please our emperor; for Louis was a great king; Henry IV. would however have been preferred; have you the portrait of Peter I. of Russia?

Father Jeronimo. No.

Jacob. I am sorry for it; he would have thought more of it than of any other; Peter I. seldom made war but for defence, and was chiefly occupied in civilizing his empire, and in calling to it men of all countries and of all religions.

Father Jeronimo. That prince was not of our

communion; but I have portraits of the most handsome queens of Europe. As the emperor is fond of fine women, these will please him greatly; they have a beautiful colour, being red as roses, and white as lilies.

Jacob. There, however, you are mistaken; our Emperor likes none but black women.

Father Jeronimo. Is that possible?

Jacob. Nothing is more certain; remember you are in Africa, where every thing is contrary to the State of Europe.

Father Jeronimo. We did not think of that.

Jacob. Are these all your presents for the court?

Father Jeronimo. I have likewise a letter of congratulation from the Pope, addressed to the emperor on his victories; but as I cannot appear here in a character of sufficient consequence to present it publicly, I shall show it only according to circumstances.

Jacob. And does the Pope correspond with Mahometan princes?

Father Jeronimo. Yes, he writes sometimes to the King of Persia, the Grand Signior, and even to Pagan Kings, when they are possessed of power, that he may facilitate the establishment of missions in their different countries.

Jacob. You will do well not to show your letter to the emperor; he is a rooted enemy of

the Christians; he likes their bills of exchange better than their compliments. Are these all?

Father Jeronimo. I have a quantity of barometers and thermometers from Florence.

Jacob. All that is of little value in this country.

Father Jeronimo. I have Venetian mirrors, Genoese wash-balls, perfumed gloves from Rome, and scented water from Naples.

Jacob. That is good for the seraglio; you acted well in that; there is no success but by means of the fair-sex. Have you not any elegant arms?

Father Jeronimo. I should have brought some, had not the emperor been at war with Italy.

Jacob. You must have some good wine with you.

Father Jeronimo. I have some excellent wine called Monte Pulsiano, and Lacryma Christi; although this prince be a Mahometan, we thought that he sometimes drank wine.

Jacob. Very good; but you must give it him secretly; he would not otherwise accept it. You must present it to him as an European remedy; I will send him notice of it by means of his physician, who is of my religion and my intimate friend.

Father Jeronimo. I shall be greatly obliged to you; I have likewise brought for Empsael a spy-glass to use at sea with an excellent telescope.

Jacob. He will not receive them; between ourselves he is a kind of savage; but do not be frightened at him. I will speak to him in your behalf.

Father Jeronimo. I brought likewise a pearl necklace for his wife; you know that she declined it.

Jacob. You will give it me, and I will take charge of it. I do not think you will get any thing from Empsael; but when you are at the city of Morocco, I will bring you into credit with the Emperor; you shall have the choice of the slaves of your country; I will give you a list of the different persons to whom you should make presents. You will begin with the governor of Aguer, where you disembarked; and you will give something likewise to the superintendant of the custom-house at that port, who is of my religion; also to the porters of the palace at Morocco; to the Emperor's physician; to the commander of the negro guard; to the black sultana, who is the favourite; and to her first waiting woman, who is a white. You well know what a court is!

Father Jeronimo. All that will go hard with my stock.

Jacob. I ask nothing for myself: I repeat it to you, I wish to serve you without recompense; I will accommodate you in my house at Morocco.

Father Jeronimo. Signior, you confuse me with your goodness.

Jacob. I will change your money gratis against the currency of the country.

Father Jeronimo. In truth, Signor Jacob, I know not how to requite such great services.

Jacob. You will do it by putting unreserved confidence in me; you will find a number of people here ready to deceive you. In what kind of money do you expect your remittances from Leghorn?

Father Jeronimo. In hard Dutch ducats.

Jacob. Then you must be on your guard; ducats lie in very little room, and are easily carried off. In what ship are they to be embarked? I shall be on the look out for them on their arrival.

Father Jeronimo. I tell you candidly, I brought them with me, and they are, with my presents, at the custom-house.

Jacob. What, you have not got them yet into your possession? A bag of gold in a large case is very easily appropriated amidst the bulky articles that are unpacked and repacked.

Father Jeronimo. My gold is concealed so that it will be no easy matter to find it.

Jacob. The Italians are a very deliberate set; but your gold will discover itself by its weight.

Father Jeronimo. That cannot be. The lead

weights for the clock are hollow, and my ducats are enclosed in them.

Jacob. That was well thought of.

Empsael comes up. I left her all in tears. (*To Achmet.*) These slaves must be found, and this evening too. Signor Jacob, I did not see you; what business brings you here.

Jacob. Illustrious Signor, it is a business of importance which concerns you particularly.

Empsael. Is the Emperor unwell?

Jacob. I left him in perfect health.

Empsael. I am glad to hear it; let me learn first what this stranger wants; my father, what is it you ask?

Father Jeronimo. I am come, mighty minister, into Africa with the charitable contributions of Christians for the redemption of captives in the empire of Fez and Morocco; I am the bearer of passports from the emperor, signed by your excellency.

Empsael. The Christians employ means of every description against us; the Spanish ecclesiastics pay their king the tenth of their revenues that he may carry on a perpetual war with us; and other ecclesiastics come with money to redeem those of our enemies who have fallen into our hands. Would the emperor but take my advice, this traffic would soon be brought to a close; it is contrary to our interest; labourers

are of more consequence to us than money ; but since he has permitted you, you may treat with all the individuals in the empire except with me.

Father Jeronimo. Signor Jacob has promised to support my representations to your excellency.

Empsaël. There must be no talk of support in regard to me ; every business must stand on its own merits.

Father Jeronimo. Your virtuous spouse, illustrious Signor, promised me her protection with you.

Empsaël. Zoraid does not extend her influence with me to public affairs.

Father Jeronimo. Permit me only to redeem those of your slaves who are most in years, and of least use.

Empsaël. Among our enemies the persons most in years are the most guilty.

Father Jeronimo. Consider that I have crossed the sea, and have incurred a number of dangers for this mission ; my lord, in the name of humanity.

Empsaël. I repeat it, you can redeem captives without opposition in any part of the empire. Your conduct is commendable ; you do it out of humanity ; but it is also from humanity that I give up none of my captives, and that I carry on an implacable war against the Christians who are the scourge of Africa.

Achmet. Signor, his humanity is nothing but the interest of his order ; he bears the same cross as the Knights of Malta.

Empsaël (to Achmet). Hold your tongue.— This stranger is here on the emperor's word and on mine ; his person is sacred.

Father Jeronimo. I entreat your excellency to grant me at least one favour, for which I shall be very grateful.

Jacob. Yes, Signor, he has brought a necklace of fine pearls for Zoraid.

Father Jeronimo. Although arms in your hands are terrible to Christians, I will add, Signor, to this necklace an elegant sabre of Damascus for yourself.

Empsaël. Every minister who accepts presents, or who permits those belonging to him to take them, is a corrupt minister ; I receive nothing but from the emperor, and Zoraid receives nothing but from me. But I pardon this offer on account of your European usages and your unacquaintance with my rules. What is the favour that you ask of me ?

Father Jeronimo. I ask leave to go to the prisons to comfort the captives.

Empsaël. You may do so ; I commend your virtue.

Father Jeronimo. Give me leave to make use of all the consolations of my religion.

Achmet. Signor, that would be an abuse.

Empsaël (to Achmet). If you dare to say a word!—(*To Father Jeronimo.*) I consent to what you ask; the Christians are unwilling to let their black slaves continue in their native religion; but the Mahometans, more equitable, impose chains only on the bodies of their enemies; their minds they leave at freedom.

Father Jeronimo. Signor, I shall address to Heaven the most fervent prayers for you and for Zoraid.

Empsaël. I thank you for it; God listens to the prayers of sincere persons of all religions; adieu.—(*To his guards.*) Let an escort be given to this honest priest; let him be conducted to the tents of my guests; it is too late to send him back to town.—(*To Achmet.*) Let my fugitive slaves be found forthwith.

Achmet. My lord, I declare to you on my head, I know not where they are; as the white was in years, and would not have been able to follow the crew of his ship, I made him set out from Cape d' Aguer on a camel before day-light; he arrived this morning in camp, and was forthwith put to labour on the works, that he might not have time to think long. As for me, I came up to-night with the rest of the crew; I have laid its flag at the feet of Zoraid; and have made my whole detachment fall prostrate before her,

according to custom and your orders. My lord, you have not a more faithful servant than me.

Empsael. And what is become of the black who was along with this white?

Achmet. He has all along followed his master; for he cannot be a moment without him.

Empsael. You should have prevented that.

Achmet. I might as well have killed him, which indeed I was on the point of doing; but a slave is of value, and I should have been obliged to pay it you. Besides, he was a black, and I respect his complexion.

Empsael. Whither was this Spanish vessel bound?

Achmet. To Guinea, on the slave-trade.

Empsael. Of what was her cargo made up?

Achmet. Of the articles which the Europeans are in the habit of carrying for that traffic; of brandy to intoxicate the negroes; of bad muskets to make them fight with each other; and of irons and manacles to bind the prisoners.

Empsael. What was the ship's name.

Achmet. Our Merciful Lady.

Empsael. Our *Merciful Lady* going on a slave-trade expedition with brandy, muskets, irons, and manacles! What a perfidious set are the Spaniards! And what was the name of this white slave?

Achmet. My lord, I do not know it.

Empsael. What! not know his name?

Achmet. When I have got hold of a person, I care very little about his name; what would you have said if, instead of the ship, I had brought you her name? In spite of her formidable fire, we came near enough to read it without a glass. In truth, your negro guards go into action like spaniels into the water.

Empsael. What! you do not know even the family name of this slave?

Achmet. It may be very easily learned from the ship's company; as to himself, he has not uttered a word since he came into our hands.—All that I know is that his hair is white, and his beard grey. As to his other features, I can say nothing.

Empsael. And what quarter did he come from?

Achmet. I believe he came from St. Domingo, as well as the ship.

Empsael. From St. Domingo? that country is full of my enemies.

Achmet. You should then congratulate yourself on the capture of this one; for he is in very good circumstances. All his kitchen utensils were of silver; it is one of the best captures your ships have made for a long time.

Empsael. The proprietor is perhaps an inhabitant of St. Domingo?

Achmet. I do not know; all I know is that, two hours ago, he belonged to the number of your slaves; and I shall find him again, were he at the bottom of hell.

Empsacl. A rich man from St. Domingo— You must have aided his escape in the hope of some great recompense.

Achmet. By the life of Zoraid, illustrious Signor, I am incapable of such an action! I detest the Christians; I am a native of Sicily, of a family of oppressed peasants; we were in want of bread in a country which might furnish enough for all Italy. When I grew up, my father and mother thought the best plan to keep me out of misery was to make me a musician, and they were on the point of selling me for a trifle to a Neapolitan music-master, when I escaped from their inhumanity by taking refuge on Mount Etna among the banditti. After doing my country all possible mischief by land, I determined to do it still more by sea. I came into Africa, where I abjured my creed; and placed myself under your banners. I save a Christian! Were it in my power I would put my own father in chains.

Empsacl. Wretch! how can you speak thus of your relations! I regret mine every day of my life.

Achmet. I love mine as they loved me.

Empsael. Oh my dear relations! I would give ten of my best slaves to meet again with him who was returning from St. Domingo.

Jacob. Illustrious signior, I can procure you some who will do better for you than those whom you regret; I shall be able to get them at a moderate purchase.

Empsael. I do not wish to get slaves by purchase, but by fighting.—In what manner do you treat my slaves?

Achmet. I treat them with severity. I employ the natives of each country in the way least suited to their disposition; the active French in sawing long cedar beams; the lazy Spaniard in carrying them; the inhabitants of the barren rock of Malta in drying marshes; the Venetians and the Dutch, who are familiar with water, I employ in bursting rocks. I hold up the prospect of liberty perpetually to them that they may be tormented with the thought of not attaining it; as the cat holds a mouse in its claws, lets it go, and then catches it again, I make a sport of their vain projects, and their hopes. At night I make them go down, whatever be the state of the weather, into deep *matamores* closed with strong iron rails, where they have difficulty even in breathing; I make them appear at the roll-call three times a day; I give them water and

barley-meal by short measure, but blows in abundance.

Jacob. In the book of Ecclesiasticus it is said : “ Fodder, a wand, and burdens, are for the ass ; and bread, correction, and work for a servant :” if his master show him indulgence, he will abuse it.*

Empsael. Unjust maxims ! every nation should be employed agreeably to its natural disposition, and every slave should be allowed plenty of provisions ; I desire that they should be made to transport cannon on all the heights which command the sea ; I wish that the noise of these cannon may from a distance strike terror into European ships, and warn them that here is the frontier of Morocco, the abode of Empsael.—How many slaves have I got ?

Achmet. It would be impossible for me, mighty Admiral, to tell you their number ; your corsairs make captures daily. You have some at Cape d’ Aguer, at Azamor, Tetuan, Tangiers, Sallee, Morocco ; you have of all the maritime nations of Europe, and even of some that are not maritime.

Empsael. How do they behave ?

Achmet. Often in a very dangerous manner. The Spaniards are long silent, and burst out all at

* Ecclesiasticus, xxxiii. 25, et seq.

once; the English are taciturn, and shoot themselves if they do not get what they want; the Italians cabal among each other, make pasquinades, but obey in the long run; the Germans are patient, and easily subjected by the power of habit. But the most difficult of all to manage are the French. They cannot put up with a state of captivity; they are always busy with some new contrivance; they dig subterranean passages; they scale high walls; they have, I verily believe, the power of getting up into the air. Were not these European slaves jealous of each other, they would have been long ago at liberty. But they are so full of discord as to abuse even those of their companions who devote themselves to the service of the others.

Empsaël. With men of this character one must always be in a state of war; hence the practice of the inhabitants of Morocco of carrying at all times two cutlasses and a poignard. In America a white man may walk with merely a stick in his hands among black slaves; but in Africa a black should always be armed when among his white slaves.

Achmet. Their divisions conduce still more effectually to our security than our arms. They are full of vanity even when in irons; the Spaniards speaking only of their family distinctions, the English of their national glory, the Italians

of their religion, the Germans of their emperor, the French of their king. The French are the most to be dreaded ; as they are extremely attentive to females, they find the means of interesting them in every quarter in support of their projects ; no doubt, they have here the assistance of Zoraid, who is a native of their country.

Empsael. I shall look after all that ; you told me that I had some slaves from countries that are not maritime ?

Achmet. You have some Prussians, Austrians, Swiss, and Poles.

Empsael. How do you treat these people ?

Achmet. The same way as the others.

Empsael. They should be treated more rigorously, because although they have land to cultivate in their own country, they must needs invade that of others. A countryman is inexcusable when taken on a maritime adventure. You will give me a list of the different professions of my slaves.

Achmet. As to their professions one would imagine that they had all been kings or ministers in their own country from the way they interfere in the plan of governing this ; they look on Africans as barbarians ; to hear them, every thing is excellent in their country ; and yet most of them are unlucky devils, who, like myself, have left it for want of subsistence. There are among

them musicians, sailors, soldiers, artists, and even attornies.

Empsael. They must not all be treated in the same way ; to act properly we should in every thing do the contrary of what we see on the part of the Christians. Their practice is to respect nothing but fortune ; they will honour a knave if he be rich, and despise a worthy character if poor ; they would respect their enemy if he was a nobleman or a man of consequence in his country ; but would have no pity for him if he were without credit or in want. Now let us act an indulgent part towards those of our enemies who gain their livelihood by a business ; I mean such as soldiers and seamen, who are forced by their wants to take service. They are led to war like packs of dogs to the chase, and kill game for the use of their masters. Let the pressure of servitude fall on the leading men among Europeans ; the ship-owners who pay them ; the nobles who lead them on ; the priests who exhort and direct them ; these are the true delinquents. Ah ! were one of their kings or ministers, who in the midst of their pleasures issue orders for the misfortune of Africa, to fall into my hands, I would heap on their heads all the misery of that slavery which they are so instrumental in continuing in the case of others. As to the females, they must be treated with compassion : they are

the weaker vessels, and do not deviate from the path of humanity unless when led astray by men. You will follow the same course in regard to children ; let the emperor's lightning, like that of Heaven, fall on the cedar of the mountain, and spare the grass of the valley.

Achmet. Heaven in my opinion strikes without this discrimination ; its lightning fell upon me when I was but a child, but that of the emperor shall not go at random.

Empsael. You are not then a believer in the justice of God ?

Achmet. No, I believe only in the strength of man ; it is only by means of force that things are governed in this world.

Empsael. Lawless man, do you not see that Heaven has appointed the punishment of Europeans on the shores of Africa ! He has given me a greater power over them than you, because I had suffered more from them. Take steps to recover my two fugitive slaves alive or dead.

Achmet. I know of only one means of doing so ; that of putting to the torture all the slaves in the camp. I shall force them to tell me where their companions are ; I shall employ the means of hunger, thirst, fire, and sword, to extort a confession.

Jacob (to Empsael). Signor, if you will permit me to give my opinion, that course is not a

sure one ; the better way would be to promise a reward to whoever shall denounce them ; it is in our power to resist torture, but not money.

Empsael. I leave it to Europeans to act with cruelty and corruption towards their enemies ; my mode of making war is open and loyal ; I employ force against the strong, and justice against the weak. (*To Achmet*) Go, find my two slaves ; above all take care you do not injure them ; it is natural for a captive to attempt to get his liberty, and when he escapes, his keeper only is to be blamed. Above all, spare the black slave ; respect men of my colour even in irons.

Achmet. My lord, you shall be obeyed in all respects. (*He goes out.*)

Empsael. Let us now speak with freedom. How is our victorious emperor ?

Jacob. I left him in the best health at my departure from Morocco ; the most tranquil old age crowns his glorious life. He passes almost all his time in one of his country houses, or in the shade of an orange grove ; he gives audience at the side of a rivulet to all his subjects, black or white.

Empsael. He is more than ninety years old. When in the month of Ramazan I asked his leave to come and breathe my native air for some time, he was fresh and vigorous ; I left him full of attachment to me.

Jacob. He finds, like you, great pleasure in a country life ; it seems to have the effect of prolonging his days. As to his attachment to you, you know that a court is subject to changes.

Empsael. What ! has any thing happened in regard to me since my departure ?

Jacob. My lord, I longed for a moment to speak to you in private ; that is my secret reason for undertaking this journey,—But can nobody hear us in this place ?

Empsael. Speak freely ; we are not amongst courtiers. No inhabitant of these forests is capable of a deceitful act.

Jacob. During your absence very serious storms have occurred, and have well nigh upset your interest altogether. Were I to tell you all, you would hear enough to make you withdraw altogether from the ministry ; I have been in the most shocking state of disquietude, for your life was at stake.

Empsael. They may take my life, but they cannot rob me of my courage. Tell me all that you know.

Jacob. My lord, the emperor, relaxed as you know, by the pressure of years, thinks only of cultivating peace, and diffusing its blessings throughout his vast conquests. Your enemies took advantage of this disposition, and of your absence, to undermine you in his opinion ; repre-

senting that your passion for war had ruined trade in his dominions ; that no money except foreign coin was to be seen there ; that all manufactures were in so unfortunate a condition that there were in his harbours neither docks for ship building, nor founderies for cannon ; in short, that the empire was on the brink of ruin. The learned city of Fez, to which you have sent all the European books found on board your captures, represented to the emperor that her colleges were deserted because her students took service by hundreds on board your privateers : they declared that if things went on so there would soon be neither churchmen nor lawyers ; the consequence of which would be the loss of religion, and of the national independence. On the other hand, the African whites, jealous of the preference given to the blacks in regard to all public employments, spread abroad a rumour that you aimed at rendering yourself independent by dint of men of your own colour ; that with that view you had formed the emperor's guard of blacks who were devoted to you ; that you were erecting a fort in the neighbourhood of your native country ; that you lodged there whatever was most dear to you ; and that you meant to take advantage of your wealth, your power, the age of the emperor, and the youth of his son, to obtain possession of the crown. The European

consuls, who are your inveterate enemies, strengthened these rumours by dint of rich presents distributed about the palace; and lastly, your faithful blacks, discontented at your marrying a white woman, declared that, despising your native blood and the example of the emperor, whose favourite wife is black, you had doubtless an intention to connect yourself with the Christians of Europe. The long attachment of Muley Ismael to you, shaken by so general a combination, was affected to such a degree as to make your friends dread that he would call for your head before calling for your justification.

Empsael. Have you told me all?

Jacob. Yes, my lord.

Empsael. So long as the emperor follows my maxims, his dominions will continue to flourish. I cannot repeat too often that the policy of Africa should be opposite in every thing to that of Europe. We should leave to the Christians the luxurious manufactures which corrupt them; the palaces and warehouses of Morocco are but too well filled with the cloths and jewels which I have taken in European prizes; we have no occasion to coin money for our trade; our gold and silver currency is Spanish and Portuguese; our treasury is full of it. As to the manufactures of articles of war, that also is a matter of indifference to us; our supplies are in Spain, Italy,

France, and England ; our arsenals and our harbours are full of ships and cannon taken from these powers ; so full that we might make them an object of traffic. If there are any other branches of manufacture which might be useful to us, let our rule be to give freedom to the exercise of all religions. This will bring over very useful settlers from the enemy's country, where toleration does not exist to a sufficient extent. As to Fez we have no occasion for schools there ; we shall be at no loss for well informed persons, so long as we shall continue successful ; what we want is a brave army ; conquest is our religion, and vengeance our justice. On the one hand, the Moors expelled from Spain in violation of the law of nations ; and on the other, the blacks reduced to servitude in America in violation of the law of Nature : these are the two lions which defend the throne of Ismael, and which he ought to lance against all Europe. To be victorious we have only to remember our injuries ; we stand in need of no other weapons than our arms ; the Europeans will always supply us with ships and cannon enough. Why should I not be at liberty to gratify my inclinations in love, as well as in vengeance ? These two passions are equally poised in my heart ; my vindictive spirit has been useful to Africa, and if my love can injure any one, it can only be myself.

As to the charge of wishing to become independent, and to obtain possession of the crown, you have seen a little cottage on a rising ground near my tents ; that is my fortress and my throne ; it is there that I take a pleasure in forgetting a restless court. It has been pleasant to me, I confess, to render it in the inside worthy of the object whom I love, by depositing in it the fruit of my victories, and by ornamenting it on the outside with the flags taken from our haughty enemies ; and if at present any thing is wanting to my happiness, it is that my unfortunate parents, who were the victims of European perfidy, should not be alive to witness my glory and their humiliation.

Jacob. My lord, the emperor was not backward in doing justice to the grandeur of your views, and the moderation of your personal wishes ; he remembered those extensive conquests in which you served him so well on shore ; the degree of splendour to which you have carried his power at sea ; the immense wealth that you have brought into his coffers ; the unshaken attachment of your countrymen ; and he has added to his titles of king of Fez and Morocco, and emperor of Africa, that of lord of Guinea, as a title of protection for the blacks, and of a more fraternal sound than that of king or emperor. He has fixed on his youngest son,

Muley Dahmet Dahebbby, born like himself of a black woman, for his successor to the throne, to the prejudice of his other children born of white women ; and, finally, he has appointed you next to himself, to accustom the youth to the important art of governing. An official order to that effect will reach you very soon ; the choice he has made of you has met with general approbation.

Empsaël. To instruct the prince of Morocco, sprung from the blood of the ancient Cheriffs and that of the blacks, no book is necessary but a sea chart. He will see there, to the northward of his dominions, perfidious Spain ; to the south, unhappy Guinea ; and to the west, the Leeward islands ; but the best way of all to learn to read in this chart is to undergo adversity. I can refuse nothing to Muley Ismael ; he has captivated me by his kindness ; but never will his son resemble him ; the prosperity of a father spoils the children.*

Jacob. If Ismael's son be formed by so great a master as you ; Africa will never want white slaves, nor Morocco treasures ; it only remains for me, my lord, to express a wish for your glory, namely, that you do not allow yourself to be too much influenced by affection for your wife. You will pardon me for saying it, but she is of a blood hostile to the Africans. When you feel her soli-

* This prediction was verified in the case of Muley Dahmet.

citations weaken your just resentment against Europeans, I pray you, my lord, call to mind the injuries they have done to Africa, from time immemorial. This country is covered with monuments of their tyranny; the worst of all were, no doubt, the Romans. After conquering Asia, and destroying the empire of the Jews, they poured like a torrent on Africa. Rome has always been the cause of the misfortunes of the world; modern Rome, more ambitious still, renders both soul and body captive.

Empsael. Jacob, I thank you for your advice; but Zoraid is not a Roman. Adieu, let me breathe for a moment alone.

Jacob. Adieu, my lord, grant me your powerful protection, and be assured of my fidelity; I swear it by Abraham.

Empsael (alone). I have spoken with too much freedom before this Jew. He is a hacknied courtier; he turns his back to the setting sun, that he may worship the rising sun. He came here to see if there was not some foundation for the rumours current on my account, and whether I was not disposed to turn to my own profit the old age of Ismael, and the inexperience of his son; he first sought to open my heart by flattery; he then tried to poison it against the emperor, the people, my friends, my enemies, and even my own wife; and, after hearing my sen-

timents on every topic, he concluded by oaths of attachment. Such is the unhappy condition of ministers! When at the height of power, they have not a friend to whom they can unbosom their solicitude. In the time of my servitude I found associates of my cares. When my master had put my burden on my shoulders, I was sure to meet on the public road some companion in slavery, as much burdened as myself; after assisting each other to take off our loads, we sat down at the foot of a tree; we talked over our mutual distresses; spoke of the barbarity of our masters; formed projects of revenge; and, finally, after assisting each other to put on our loads again, we parted with tears in our eyes, shaking hands and saying, Adieu, my friend, adieu. We separated, certain of each other's attachment without the formality of an oath; our weakness was a bond of union; but prosperity makes me distrust even my own friends. When a slave, strangers used to relieve me of my burden; now that I am a minister, I must carry that of an empire alone. There is only one confidant worthy of a man; it is his wife; nature has made them for each other. Woman has all that is wanting in man; mildness to soothe his anger, and cheerfulness to dissipate his gloomy reflections. Man, in return, imparts to her strength to support her weakness, judgment to

fix her changeable imagination, while Nature puts them perpetually in the happy necessity of sharing their pleasures and their pains ; yes, a wife is the dearest portion of man. While during the day he gives his attention to business, he has the comfort of thinking that in the evening he will pour forth all his anxieties in her bosom. But when he sees that another has taken his place there, and shares her esteem or her confidence, by means of national or religious prejudices, he no longer recognizes in her his half.—The heart is all, the rest is nothing. Yes, to find another man in possession of his wife's heart is worse than to find him in possession of her person. My enemies have got possession of mine ; while just resentment animates me against them, she is distressed by an ill-founded pity ; my victories make her weep. Go then, Empsael, to seek repose against the intrigues of courts, the ingratitude of nations and of kings, in your wife's bosom ; you will find there sympathy for your ancient tyrants, and even for your own slaves. How happy the man who lives single and in obscurity ; how happy should I have been if, on coming out of my state of slavery, fortune had cast me alone and unknown into the midst of this forest ! I should have subsisted by the chase, and have enjoyed liberty. These ancient trees, these deep valleys, these bleak mountains covered

with bogs and crowned with resplendent snows, please me more than the imperial palace of Morocco, surmounted with its golden balls. My soul expands in these solitudes which have the heavens for their vault, and God for their master. I delight to look at these mouldering towers, these ruined ramparts, and this great skeleton of an European city, destroyed by the progress of time. I take delight in running through these long silent porticoes, replete in former days with a tumultuous, noisy, and insolent people. I take pleasure in following boars and buffaloes into these vast squares, where the Roman legions displayed their shining armour before the palaces of their generals, proclaiming them the lords of Africa. The structures raised by Cæsar, great as was his power, have become here only a hunting place for Empsael, a black. The ambitious nations of Europe must needs erect stately monuments; the blacks, more prudent, raise only cottages. No monarch of Guinea ever constructed an edifice higher than a palm tree, or intended to last longer than the life of man. The pride of Europe is to leave trophies in all directions; that of Africa to overturn them. Time has avenged my country for the injuries of former days; let us now take vengeance on the present tyrants; let us reduce their fleets to ashes, render

their towns as desolate as the one before me, and carry off its inhabitants as slaves to Africa ; let us discharge all our revenge on those who are in my power. The bonds of duty are relaxed among them ; they run away as soon as they arrive ; they find protection in my wife's tears. I have established order in three kingdoms, and shall I not be able to establish it in my heart ? Love and vengeance dispute its empire ; let us banish love, and bid adieu to compassion. Henceforward I shall see Zoraid in tears at my knees without being affected by it.

(Benezet passes in the dress of a slave ; he proceeds towards Cæsar's tower.)

Empsael. What do I see ? My runaway slave ! hola ! stop ; who are you ?

Benezet. An inhabitant of the world.

Empsael. You are an European ; I know you by your look ; where is your passport ?

Benezet (holding out the plants which he carries in his hand). Here it is.

Empsael. Plants in the hand may do as passports among innocent men ; but Europeans are in the habit of using writings as treacherous as themselves. I demand your passport.

Benezet. Friend, I have no other. Useful plants make me welcome among innocent and good people.

Empsacl. What is your profession ?

Benezet. The same as thine ; I am a sportsman.

Empsacl. What game do you pursue ?

Benezet. Animals more terrible than lions, and my weapon is stronger than a lance.

Empsacl. You are then one of those *marabouts* of the desert, who deceive people by enchantment ? What animals do you mean, and where are your weapons ?

Benezet. The animals I mean are our passions, and my weapon is patience.

Empsacl. Tell me why you venture alone into these deserts. Do you know that this is the City of Lions ?

Benezet. My brother, a thorny bush, or the ruins of a monument, are sufficient to defend me from lions ; but lions defend me from men who are much more to be dreaded. Lions do not injure men unless provoked ; they never injured the ancient hermits of Egypt, nor those of thy religion who live in deserts.

Empsacl. You are in the right ; but how do you find the means of living in this barren forest ?

Benezet. The trees supply me with fruit ; during the day I seek plants on the mountains ; at night I withdraw into this tower, which is inaccessible to the wild beasts.

Empsacl. Why have you renounced the world ?

Benezet. It is the men of the world who properly should be said to renounce it ; as for my part, I enjoy it every day of my life ; I regulate my travels by the course of the sun, passing spring and summer in America ; autumn in Europe ; and winter in Africa. Every day I rise and retire to rest with the sun ; during day-light the blessings of God scattered profusely over the earth fill me with gratitude, and at night the magnificent display of the heavens transports me with delight. Believe me, friend, the mere sight of the sky inspires me with pleasant dreams.

Empsael. Alas ! in former days I lived happy as you do. But how can you accustom yourself to live alone ?

Benezet. The principal actions of our lives are done alone ; we sleep, we think, we suffer ; and finally, we die alone.

Empsael. Why not make use of your knowledge to aid mankind ?

Benezet. It is for the purpose of aiding them, and of receiving no offence at their hands, that I live at a distance from them. I carry from one country to another the seeds of useful plants. Among rich nations, I sow them in the forests, where their value is understood only by a small number of sages ; but I carry them among poor and hospitable tribes, who cultivate them with gratitude in their fields. If by the way I find

men afflicted with the passions which attack a corrupt people, such as the prejudices of glory or of superstition, I endeavour to eradicate them, that they may be enabled to live in peace with others, and particularly with themselves.

Empsael. Make men live in peace! Men and women, whites and blacks, Christians and Mahometans, men of all descriptions are in a state of war. But where do you mean to go next?

Benezet. Into Guinea, in the hope of putting a stop to the slavery of the blacks in the West Indies.

Empsael. And by what means?

Benezet. By means of these two plants.

Empsael. These plants have then a magical power?

Benezet. They are the coffee-tree and the sugar-cane. It is for the purpose of cultivating them in the West Indies, that Europe fetches slaves from Africa. I wish to teach the blacks to cultivate these plants in their own country, and if I find them docile, I shall one day, with the aid of my brethren, put up sugar works among them. America will then take no more slaves, and Europe will live in peace with Africa.

Empsael. Our Cheriff Mahamed established formerly the culture of the sugar-cane in the neighbouring valley of Tarudant. The country derived great wealth from it; but war put an end

to it. Generous man, it was a noble thought to aim at terminating the misfortunes of three quarters of the world in so pacific a manner; but you do not know the Europeans. No sooner will the blacks have enriched their lands by the introduction of this cultivation than the whites will invade it. At present they seize the inhabitants; in that case they will seize the country. It is thus they acted in that part of Asia which is famous for its spiceries. It would be necessary therefore that, along with the arts of peace, you carry to the blacks the art of war, that they may know how to defend themselves: all this requires time and expense.

Benezet. I will give them a means of defence which will cost nothing.

Empsael. And what is it?

Benezet. It is to refuse nothing to those who wish to rob us.

Empsael. Your feeling heart seems to affect your understanding.

Benezet. Friend, I am perfectly in my senses, I assure thee.

Empsael. Refuse nothing to those who wish to rob us! There is no example of such conduct in any part of the world.

Benezet. I assure thee that it supports in peace, and even causes to flourish, a respectable class of men in America.

Empsael. How! do you never carry on war?

Benezet. Never. War should be confined to wild beasts.

Empsael. You have then no neighbours?

Benezet. We are in the midst of savages who are always at war.

Empsael. You are then unknown to Europeans.

Benezet. We trade with them, and we are ourselves descended from Europeans.

Empsael. What is the name of your country?

Benezet. Pennsylvania.

Empsael. And your religion?

Benezet. The Christian.

Empsael. The Christian! it has been the cause of the misfortunes of the world.

Benezet. The Europeans have made it the pretext of their violence; but in Pennsylvania it constitutes our happiness.

Empsael. I have heard this country spoken of. God then works miracles in favour of virtue?

Benezet. Do not doubt it, my brother; he works miracles in favour of those who put their trust in him; every where he undertakes the protection of the weak; he makes the evils caused by the wicked to recoil on themselves. Every man who has a slave has, in return, a tyrant, either in his wife or in his sovereign.

Empsael. You are very possibly in the right ; but Nature makes men be born in a state of war by giving them such different interests. Those of Africa are by no means those of Europe.

Benezet. Do not, my brother, complain of Nature : she has given different interests only to make up the general interest from the whole. The industry of Europe is of use to Africa, and the wealth of Africa to Europe.

Empsael. Who, then has divided these two quarters of the world for so long a time, and armed them against each other ?

Benezet. It is ambition, which arms tribes, nations, and religions all the world over.

Empsael. Yet each man imagines that truth is with his party.

Benezet. Truth is like Mount Atlas, which offers as many aspects as there are points to look at it. Some see only cultivated grounds there ; others forests ; others rocks ; those who see it at a distance imagine it to resemble an aged man, with grey hairs, carrying the heavens on his shoulders. The ambitious man is he who aims at forcing other persons to see only what he sees ; but the sage who sees things in every point of view is the only one who judges soundly ; the case is the same in regard to truth.

Empsael. It is the Europeans who cause all

the mischiefs of mankind; I have consequently sworn a perpetual hatred to them.

Benezet. Thou makest war in vain against Europeans; thou hast in thy own breast a more formidable enemy—the thirst of revenge.

Empsael. How can I banish it from my heart, when monuments of tyranny rekindle it even in the midst of deserts?

Benezet. Thou mayest banish it by reflecting that those who have given vent to it, like thee, are now dead, and have left behind them only names that are become odious in the eyes of an oppressed people. This tower, built by Cæsar, is called the Devil's Tower.

Empsael. My name shall be dear to Africa, for I have avenged her cause.

Benezet. There may arise after thee enemies to the blacks and to thy memory. There is one sure method of leaving a memory dear to all mankind.

Empsael. What is it?

Benezet. To practise virtue.

Empsael. Virtue is a victim in every part of the world, except perhaps in Pennsylvania.

Benezet. Virtue triumphs in heaven, and in the estimation of posterity. Look at this little tomb with these coronets upon it; it is the tomb of a charitable woman; it is more respected than Cæsar's tower.

Empsael. I am affected by what you say ; but what good can I do, surrounded as I am by white slaves ?

Benezet. You may make them happy by means of these two plants, as I hope to make the blacks happy with them. If by introducing their culture, I put an end to the slavery of the blacks in the West Indies, you may, in like manner, put an end to the tyranny of Europeans by making them laborious. We shall both arrive at the same end by different ways.

Empsael. Europeans will not work but by compulsion ; but come with me to Morocco ; the emperor busies himself only with pacific objects, and you shall have a place at his court.

Benezet. I go only among the weak and miserable. I made myself enemies in Europe by advocating there the cause of the blacks ; I should do the same in Africa by advocating that of the whites.

Empsael. Do you know who I am ?

Benezet. My friend, thou art Empsael, minister and high-admiral of Morocco : I have more than once heard the noise of thy horns in the forest, and that of thy cannon on the shore.

Empsael. What is your name ?

Benezet. Anthony Benezet.

Empsael. My good Anthony Benezet, were I

at liberty I should like to pass my days as you do, in solitude.

Benezet. My brother, I will point thee out a solitude more impenetrable than that of Atlas, to which thou canst retire whenever thou thinkest fit.

Empsael. Where is it?

Benezet. In thy own heart, if thou expellest passion from it.—Adieu: the shade of evening is already falling on Cæsar's tower; this is the hour that the lions come forth from their hiding place, and that I enter into mine.

Empsael. Adieu, wise European: may all your countrymen be like you! (*Empsael is left alone.*) This white goes over the world for the happiness of the blacks, and I, a black, sail over the sea to cause misfortune to the whites. This man's virtue appears to me more glorious than all my victories. Yes, he is in the right. The tomb of Mentia is more respectable than Cæsar's tower. (*He goes up to it.*) But what do I see among these crowns?—Zoraid's necklace! I saw it this morning on her neck when I left her sunk in profound sleep. She has deposited it as an offering on the tomb of Mentia before addressing herself to me in behalf of the unhappy. Zoraid, you who can obtain every thing from me, seek protection against me among the dead! Feeble liana, you take hold of a dead liana to enable you to resist the tempest that shakes you. Sovereign of my

heart, my hand, surrounded with your favourite colour, has often triumphed in battle; it has shed the blood of my tyrants; it ought to dry away thy tears. Let us contend against vengeance. Often, when on board of ship, has it been my lot, in despite of contrary winds and raging waves, to board and capture an enemy's vessel; let me now combat my passions. The sea-eagle finds means to advance against the winds which oppose his wings, and to rise superior to the tempest. Let me try to rise superior to myself. Ornament of my virtuous spouse, be to my arm like those celestial fires which appear at the top of our masts, when the tempest has ceased, as a token of the calm of the sea and of the serenity of the heavens.

(While Empsael was going back to his palace immersed in thought, his two unfortunate slaves had attempted in vain to make their escape. Having lost their way in the forest, and having no guide, they suddenly came upon Zoraid's cottage. On looking at it, Almiri could not help feeling a joyful sensation.)

Almiri. Here is the cottage: O my master! you are now safe.

Don Ozorio. How did you manage to find your way hither?

Almiri. By taking the stars for my guide, as is done in my country. On the one side is the

star of the elephant; on the other side that of the colibri.

Don Ozorio. My friend, we are not safe here. If they find us here they will punish us as runaway slaves, perhaps as robbers; it is the height of misfortune to look on one's prison as an asylum, and yet not be able to get into it.

Almiri. My father, you are greatly fatigued; sit down on the grass. (*Ozorio, conducted by Almiri, sits down between two rocks.*)

Don Ozorio. Night itself, which is so favourable to the unhappy, is adverse to us.

Almiri. O sun, in your absence all is dead; you are the great spirit of the universe.

Don Ozorio. There is another spirit, my son, who governs the world at all times; it is God: the sun is his finest work.

Almiri. But, when the sun is set, all is asleep on the earth.

Don Ozorio. When God makes the sun set in our part of the world, he makes it rise for other countries.

Almiri. How! does he then never sleep?

Don Ozorio. Never: he turns always round the earth.

Almiri (apart). My master's mind must be disordered.—How is it possible that the sun can turn at night round the earth, since we see him set every evening in the sea?

Don Ozorio. My friend, I cannot explain that to you at present ; I am indisposed, and indisposition affects the mind.

Almiri. My master, take rest, and endeavour to sleep.

Don Ozorio. My friend, there is no rest for me in slavery ; slavery contains all kinds of evils, and deprives us of every blessing. It takes away from us the use of light, air, water, and earth ; the fruits of which we collect only for our tyrants.

Almiri. Do not be uneasy. During night, when we are in prison, I will get you light by kindling your fire, and, during the day, when out of doors, I will fetch you water. I will cultivate the ground for you, and get you plants that are fit to eat.

Don Ozorio. Domestic animals, though naturally attached to man, become his enemies when he falls into a state of slavery. In this country, the dogs belonging to the negroes run after the whites ; and, had it not been for you, they would probably have devoured me.

Almiri. At St. Domingo they do quite the reverse ; but as they are fond of the blacks in this quarter you have nothing to fear. I will accompany you in every direction.

Don Ozorio. Dogs have always been faithful to their masters ; but in a state of slavery a man abandons his friends : here men of the same

nature dispute the most pitiful subsistence with each other. They betray, persecute, and inform against each other.

Almiri. I shall always be your friend, notwithstanding the difference of our colour.

Don Ozorio. Slavery bursts the most sacred ties of nature; it separates even fathers and their children.

Almiri. For my part, I shall always be attached to you as a son; you have acted the part of a father to me.

Don Ozorio. O my son, it is in vain that you seek to comfort me; so many evils united are too much for me, and when the body is sick there is an end of all fortitude; sickness robs us of memory, judgment, and foresight. It is in vain that when in health we confide in our knowledge and our courage; we are nought but weakness in a state of illness; it is an enemy which takes possession of our inside, and sets at nought our wisdom and our reason. Are you apprized of any remedy for illness?

Almiri. Yes.

Don Ozorio. What is it?

Almiri. Patience.

Don Ozorio. And when old age is joined to sickness, what remedy is there then?

Almiri. My father, there is death.

Don Ozorio. But it is a dreadful thing to die without assistance.

Almiri. We want no assistance to die.

Don Ozorio. You are not then afraid of death?

Almiri. Oh no! I consider death as a sleep.

Don Ozorio. You believe then that every thing dies along with you?

Almiri. No, but that I shall return into my own country.

Don Ozorio. Who told you that?

Almiri. My father and mother.

Don Ozorio. And from whom did they receive it?

Almiri. No doubt from their parents.

Don Ozorio. Doubtless, our opinions are derived only from the tradition of our parents. How happy the innocent character who sees in death no other evil than Nature has connected with it! Happy the man who was brought up in tranquillity of heart and mind! He is just as easy in regard to death as to birth. He allows himself to go along with the stream without disquietude or alarm. Happy they who were born among the nations whom we call savage! for civilized people are most to be pitied; prejudice takes hold of them at their birth, tortures them during life, and surrounds them even at death. The condition of men seems to resemble that of the countries where

they are born ; the more flattering it is, the more evils accumulate on their heads. All the evils of body and mind, the prejudices of birth, of fortune, of honour, and superstition, all attach to a person born in a superior sphere of life. O Almiri, you are more fortunate than me ; your body is in slavery, but your soul is in freedom. Yes, my son, you are in the right ; we ought not to be afraid of death ; religion teaches us the same lesson, and it is in harmony with Nature.

Almiri. My father, I will never abandon you ; I will accompany you even to the other world.

Don Ozorio. How ! you would put yourself to death :

Almiri. Yes, for the sake of following you.

Don Ozorio. O Almiri, to do so would be a great crime.

Almiri. My life belongs to me.

Don Ozorio. It belongs to society.

Almiri. What is society ?

Don Ozorio. I mean the men with whom we are in the habit of living.

Almiri. My life then belongs to you.

Don Ozorio. No ; I have no longer any power : your life and mine belong to our masters.

Almiri. What ! to men who make us unhappy ? My bodily labour belongs to my master, but my life is yours because it is my own.

Don Ozorio. It belongs to God, from whom you received it.

Almiri. Since he gave it to me, I can dispose of it for your sake.

Don Ozorio. No, you cannot, for he gave it without your own consent, and ought to take it away in like manner ; besides, if I die, you cannot follow me ; death will make a separation between us.

Almiri. No, death shall not make a separation ; we shall live and die together.

Don Ozorio. Oh my son, your kindness attaches me still to life.

Almiri. You have occasion to recruit your strength ; we stand in need of provisions ; I am going to look for some in this cottage.

Don Ozorio. Beware of taking any thing there ; it would be a robbery.

Almiri. In my country provisions are common property among the blacks ; they are not refused even to strangers.

Don Ozorio. Among the whites it is a crime to take them ; but I have more need of sleep than of food. Endeavour to take rest likewise ; sleep soothes the pains both of soul and body ; it recruits all our strength ; it is the greatest blessing of nature.

Almiri. I shall not sleep so long as you are awake.

Don Ozorio. I dread falling asleep on account of the wild beasts; the sight of fire drives them away, but I have not got even a flint.

Almiri. Oh! there is no occasion for it; I shall light a fire in the manner of my country, by rubbing two pieces of dry wood against each other. But how happens it that wild beasts are afraid of fire?

Don Ozorio. Providence, desirous of giving man tranquillity during the night, ordered it so, that carnivorous animals should be afraid of fire.

Almiri. Very well; but fire attracts flies who live on blood; how do you explain that?

Don Ozorio. You must be much at your ease to occupy yourself with such questions.

Almiri. My knowledge is not great, but I pray you to answer me, and to tell me how the fire drives away lions and attracts flies. (*Don Ozorio falls asleep without Almiri perceiving it.*) Oh! so you do not answer? You do not then know the reason; I will tell it you. There is in my country a shining fly, which, during night, is as bright as a star, and is run after, from love, by all other flies.—to get quit of them, she promises to return their love, provided they will bring her fire; and that is the reason, according to our tradition, for the flies running to the fire as soon as they see it kindled.* (*He drives away*

* This fable is current in Siam.

He flies with the branch of a tree, and says,)
Get away, poor flies,—do not throw yourselves into the fire for the sake of pleasing your mistress. *(He falls asleep, and Zoraid soon after comes up with her female attendants with torches.)*

Rosa Alba. What a cruel situation you would have been in, if Empsael had found Pedro Ozorio here! You are released from that embarrassment at least.

Zoraid. That unfortunate being is in much greater difficulty than I should have been, wherever he may now be.

Petrowna. And his poor negro?

Margaret. Who has been lighting up fire here? Madam, let us make very little noise.—Here are the two slaves whom they have been seeking in all directions. They have fallen asleep.

Zoraid. Do not wake them.—O sleep! thou soothest the pains of the unfortunate.

Rosa Alba. Empsael is on the point of coming here.—What a shocking scene it will be when he recognizes Ozorio, his former master!

Zoraid. If Ozorio learns that he is in the power of Empsael, he will die of terror. O God!

Rosa Alba. Madam, you are too kind hearted. There is a proverb in my country; “If you wish to keep out of the way of mischief, avoid doing good.”

Zoraid. That is a wicked proverb; much rather say; "If you do mischief to others, expect it for yourself." Do you not see that the mischief done formerly by Ozorio to Empsael is now punished by becoming his slave. Again, if you wish good to befall you, do good to others. Do you not see that the kindness shown by Ozorio to his black is rewarded by the attachment of that poor slave. How shall we manage to prevent Ozorio from being the victim of Empsael's rage?

Petrowna. Ozorio has let his beard grow. It is a long time since Empsael has seen him, and he is not likely to recognize him at first.

Zoraid. But after Empsael comes to ask him questions, and to learn that he is from St. Domingo, and that his name is Ozorio?

Rosa Alba. Let him merely say that he is from another country, and bears another name.

Zoraid. We should make a point of never practising deception.

Dalton. Let us acquaint him with his situation that he may decide for himself; in his place I would blow out my brains.

Zoraid. My dear Dalton, it would in truth be killing him, to show him, in his present weak state, the precipice on which he sleeps. Moreover, when once we have rendered a service to the unfortunate, we must not abandon them.

Inconstancy on the part of a protector is giving the last blow to the unfortunate person who needs our aid.

Margaret. There is one very plain method ; that of making them return with the other slaves into the matamore, by means of the subterranean passage dug out by Williams. But here comes Williams.

Williams. These cursed runaways have doubled our sufferings. The renegado Achmet, who is seeking them in all directions, has searched the prison, and most unluckily discovered the subterranean passage that I had dug. A curse, say I, on the Spaniards.

Margaret. Be calm, my dear Williams.

Williams. The renegado is waiting for Empsael's return to put all the slaves to the rack ; he wishes to find out who dug the subterranean passage.

Rosa Alba. But this good Father de la Merci, does he not find means to pacify him ?

Williams. He seems to think he does enough when he preaches patience to us.

Margaret. And the Portuguese Jew, to whom my mistress gave presents for you all ?

Williams. It was he who discovered the subterraneous passage, and told the renegado of it.— That knave sends me to patrol along the shore with the negro guards ; he has lighted fires along

the coast; you would discover even a swallow there. I would give my life to know where these slaves are; I would inform of them immediately.

Margaret. Ah, Williams!

Williams. How! they are the cause of my losing the means of meeting with you; it will be in vain for you to make signals to me; they have taken away my compass.

Zoraid. Consider they are your companions.

Williams. Although they are Spaniards, and I, Madam, a Dutchman, had they put trust in me, I should have kept my word to them even in the midst of torture, but they have told me nothing; I owe them nothing. (*He perceives them and calls out,*) Ah! there they are. (*With a softened tone.*) Poor fellows! Fear nothing, Madam; on the faith of a Batavian, I will not betray them. I will pass a trick upon our renegade, and make him think that they are gone in the direction of the coast. (*He runs towards the sea.*)

Margaret. Oh, Madam, Williams has a good heart; he will be of service to us.

Rosa Alba. I hope that Januario likewise will be of service to us. I met him bringing back Empsaël's relay horse from the chace; he told me that his master had met with a great philosopher, who is a friend to the unfortunate.

I begged him in your name to go in quest of him that he might give us advice ; on which he took fresh horses, and went back the way he came.

Zoraid. How could you find it in your heart to expose your lover so? This is a dangerous hour.

Rosa Alba. He took a torch with him ; the watch-dogs know him, and he has taken some of them along with him ; he has nothing to fear from wild beasts. He will soon come back with the philosopher.

Zoraid. He will be too late in coming. O my God, it is in thee only that I place my hope ! (*Almiri awakes, and begins driving away the flies with his leaf.*)

Almiri. Go away, poor flies—go away—your love will drive you into the fire.

Dalton. Ah, the poor youth ! he still thinks himself in his native country. (*Almiri perceives Zoraid and her women.*)

Almiri. How handsome they are ! Sultana, take pity on my master ; It was I who have led him astray ; I brought him hither as to a place of refuge ; we have done no harm.

Zoraid. Take courage, my friend.

Almiri. We were brought in the morning to Empsael's tents, and this evening we lost our way without being able to find our prison, and we have suffered greatly from hunger and thirst.

Don Ozorio. Almiri !

Almiri. Sultana, this is my master; he is almost expiring from fatigue, hunger, and thirst.

Zoraid. Bring me refreshments for them: be comforted; your sufferings are not beyond remedy.

Don Ozorio. Angel of heaven, your voice recalls me to life.

Zoraid. Sit down, my father; open your soul once more to hope.

Don Ozorio. Hope has gone before me ever since my infancy, without my being able to reach it. Now that I am arrived at the extremity of my career, I have left it greatly behind me.

Zoraid. There is a hope in heaven which virtue gives, and which remains with us till the end of our career.

Don Ozorio. Ah! had I employed myself like you, in doing good!

Zoraid. You have done good to this black who is so strongly attached to you. A glass of water given to an unfortunate person does not remain without recompense in the eyes of God; it will not be without its merit in the mind of the generous Empsael. Hark! he comes: he imagines that you are both run away. The first emotion of his anger is violent; leave me time to prepare him; you will keep yourself behind this rock, and will not appear until I call you.

Don Ozorio. Yes, Madam.

Zoraid. It may be well to apprise you that, in consequence of old resentments on the part of the Africans towards the Spaniards, he has a strong hatred of the latter. If you are asked of what country you are, what answer will you give?

Don Ozorio. That I am a Spaniard. I cannot deny my country; but to tranquillize him I will add that I am from St. Domingo. The inhabitants of Morocco have no reason to hate the inhabitants of that island; they have never done them any harm.

Zoraid. Do not be in any hurry to give an answer. If Empsael asks from what part of the Spanish dominions you are, you may then say that you are from St. Domingo.

Don Ozorio. Yes, Madam.

Zoraid. If he asks you about your profession, what will you say to him?

Don Ozorio. The Spanish gentry have none; their designation of noblemen stands in lieu of every thing.

Zoraid. The rank of noblemen is no recommendation here; but if Empsael asks you from what your income arises?

Don Ozorio. I shall tell him that it arose from my lands. I was a landholder.

Zoraid. You had, no doubt, blacks for your slaves.

Aimiri. Oh, madam ! my master treated them so kindly.

Zoraid. If Empsael asks whether you were a landholder, let your negro answer for you. Heaven, in its retributive justice, orders that here the whites should be under the control of the blacks ; and it will be a great point for you that he, who has hitherto been your slave, is now your friend. If Empsael asks your name ?

Don Ozorio. I shall tell him that my name is Don Pedro Ozorio.

Zoraid. He had formerly an enemy of that name.

Don Ozorio. That cannot have been me ; I was captured almost as soon as I set sail from St. Domingo.

Zoraid. But had you no other name ?

Don Ozorio. They call me likewise a Commander of the order of St. Iago ; and I sometimes went by the name of Marquis de Las Victorias, from the name of one of my ancestors, who had a share in conquering America. (*The sound of trumpets and Moorish drums is heard.*)

Zoraid (alarmed). Withdraw ; and when you see him enraged, I pray you not to contradict him. I repeat it, let your negro reply for you ; consider that, while here, you are under his protection.

Don Ozorio. And under yours, consoling

angel. (*He withdraws with Almiri behind the rock. Petrowna and Dalton accompany them.*)

Zoraid. Petrowna and Dalton, bring them refreshments and comfort them. And you, Margaret and Rosa Alba, make haste to illuminate this cottage; a day of triumph for Empsael ought to be a festive day for Zoraid.—O my God, watch over these unfortunate men; without thee human prudence can do nothing.

Empsael. Be comforted, my dear Zoraid, I shall succeed in recovering my fugitive slaves; my watchful guards, the camp dogs, the lions of the desert, the vast ocean, all form impediments to their flight. I will make you a present of the white slave; he observes, I am told, a gloomy silence; his age and his taciturn disposition make him proper for the seraglio.

Zoraid. Ah, my lord! if you will permit me to say so, while aiming at making me comfortable, you are surrounding me with the distresses of my fellow creatures.

Empsael. You are always pitying the misfortunes of my tyrants.

Zoraid. My lord, if I have sought to comfort your slaves, it is from love to you, and to remove from your sight the heart-rending spectacle of their distress.

Empsael. What signifies their distress when nothing is wanting to your comfort? Slaves from

every nation in Europe here are at work for your pleasure ; they bring to your feet all the productions of Atlas, from its frozen summits to the burning shores of the sea.

Zoraid. Ah, Empsael ! if you but knew how much may be done for public prosperity by the co-operation of the rich, when they are well disposed, and of the poor when they are free ! If you but knew my country, and the blessings produced there by liberty.

Empsael. What then has your country that can be compared to Africa ?

Zoraid. There is not there as here a climate always warm, and trees always covered with verdure. There the winter is severe, and the earth covered with hoar-frost ; but we do not find there, as here, towns without inhabitants, roads without travellers, forests, where trees let their fruit fall in vain, or springs where none but lions come to drink. Man, in that country, does not lose there any of the good things of Nature ; he collects a harvest in every plain, and fruits on every slope ; all is there smiling and animated. The air resounds with the songs of peasants, whether they pursue their pacific labours during the day, or gather, at evening, round the foot of the elm, to dance with the young girls of the village. The comfort of the country announces the wealth of the towns. We find there long avenues of trees, which cross

plains and are lost in the horizon, while vessels cast anchor in the rivers, and their masts appear from a distance as if mixed with the willows of the banks. It is to liberty that our countrymen are indebted for their industry; the fields, for their cultivation; the cities, for their trade; and France for her power and happiness. It is to liberty that women owe those charms which make them the object of applause throughout Europe; and, if I may venture to say so, my lord, if you have found any slight attraction in me, I owe it to that liberty which in infancy inspired my soul, and gave to my features the marks of happiness.

Empsael. You give me a very affecting description of France; would you wish to return thither?

Zoraid. I quit the most generous of men! Ah! my lord, I wish to see you happy; I should be delighted to see you surrounded with the comforts of my country!

Empsael. Did not your countrymen deprive you of your property? Did they not seek to drive from your heart the religion of your fathers?

Zoraid. I have forgot their injustice ever since they have been unfortunate; but be assured that, among the men you are in hostility with, there are many who detest your tyrants; be assured that some of them would have afforded you con-

solation in your misfortunes, could they have done it; judge of this by my feeble efforts to make you forget them.

Empsael. I can refuse you nothing. I was your guardian when you were a child; you are mine now that I begin to be in years. But I cannot forget vengeance.

Zoraid. That word freezes all my senses.

Empsael. It kindles all mine. Look at this hand which they have marked with fire; you weep.—Ah! your tears penetrate my heart.

Zoraid. (*She perceives her necklace.*) My lord, by that slight vow offered on the tomb of a woman less unfortunate than me.

Empsael. By your dear self, Zoraid! what would you have me do for these unhappy beings? They are not to be found; forget them: they are a prey to the rage of lions.

Zoraid. They dread no rage but yours.

Empsael. Where are they?

Zoraid. They had lost their way; they came to seek an asylum in the neighbourhood of this cottage.

Empsael. It shall protect them; let them appear.

Zoraid. You promise me to speak mildly to the European; he has acted a kind part to his slave.

Empsael. I swear to you by this sacred sign.

(*He shows the ribbon which he has around his wrist.*) Object dearer than Mentia! I shall receive them both as brothers in misfortune.

Zoraid. Come forth, unfortunate men.—(*To Ozorio.*) Speak with candour and openness; fear nothing; Empsael is generous even towards his enemies. O God, come to my aid.

Empsael. Christian, be comforted; your captivity arises from one of those chances which we are perpetually running at sea. The sea is like death; one day it strikes you; another day me.

Don Ozorio. Illustrious admiral, the chances of the sea ought only to affect those who make war at sea. I never did you any harm; I was cruising at a great distance from your coast when your ships captured me, in violation of the law of nations.

Empsael. Of what nation are you?

Don Ozorio. My lord, I am a Spaniard.

Empsael. A Spaniard! you are of that nation which, in defiance of the faith of treaties, drove from Spain the lawful kings of Grenada, the founders of the Moorish empire; of that nation who, without any cause, exterminated great part of the original inhabitants of America; who, the first of European nations, reduced into slavery the blacks of Africa, to transport them into America; who took possession of the islands and coasts of Asia; who extended its robberies to the

four quarters of the globe. You a Spaniard! and you speak of the law of nations!

Zoraid. Ah, my lord!

Empsael. I will restrain myself, Zoraid, since I promised to you to do so. (*To Ozorio.*) Where were you going?

Don Ozorio. My lord, I was going to the coast of Guinea to procure a cargo of slaves.

Empsael. You carried on the slave-trade, and you presume to complain for having fallen into a state of slavery! Infidel! God is just; he punishes you in the way in which you have transgressed yourself.

Don Ozorio. My lord, the black tribes in Africa are frequently at war with each other, and sell us very willingly their prisoners as slaves.

Empsael. They do so at the instigation of Europeans, who deceive them and excite among them a thousand quarrels which they turn to their own account. But after all, what right have European nations to meddle with wars in Africa, when the blacks of Africa never meddle with the wars of Europe?

Don Ozorio. Great minister, if the Spaniards come to Africa to obtain negroes, it is for the purpose of improving them by teaching them useful arts, and by accustoming them to labour; for the negroes do not work unless forced to it.

Empsael. What do you say? Have not the

negroes a knowledge of the arts necessary to the supply of their wants? Do you think that they die of hunger in their own country, or that they go in quest of Europeans to cultivate it? Which of the two are the more indolent, the whites, who stand in need of the blacks to cultivate their colonies, or the blacks who, from the surplus of their cultivation, derive enough to load those fleets of European merchantmen who come to traffick on their coast?

Don Otorio. My lord, you are in the right; but the lands in the West Indies are situated in a hot climate, and can be cultivated by none but blacks.

Empsael. Of what colour then were the Peruvians and Mexicans, those ancient cultivators of America, whom the Spaniards exterminated? Were they not white, or weaker even than the whites? The men who came to destroy them, across stormy seas and mountains covered with eternal snows, were they not also white? Can Europe send to warm countries only blood-thirsty soldiers, and not peaceful labourers? Has she strength only to lay waste the ground; does she want it for its cultivation?—But tell me, infidel, do the West Indies appear to you to be hotter than Africa, which gives so dark a tinge to the majority of its inhabitants? And was it not white slaves who built the fortifications of Mequinez, of Taflet, of

Sallee, and the monuments of the incomparable Fez? Was it not thirty thousand men of your nation who raised the ramparts of Morocco, strong as the rocks of Atlas, under the orders of that scourge of Spain and avenger of Africa, Jacob Almanzor? * Were not these labours more severe, under a sky so near to the burning Zaara, than the cultivation of coffee and sugar under the fresh breeze of the West Indies? Give me an answer.

Don Ozorio. It is but too true, my lord. White slaves support still more intense labour in Africa, than black slaves in America; here, we are made to carry chains when at work; even during the time of sleep, that comfort of the unhappy, we are not permitted to breathe at freedom; we are confined in close matemores.

Empsaël. According to your own confession the Europeans are more robust than negroes, as they support severer labour under a climate still hotter than that of your colonies. Confess, likewise, that they have much more perversity in them than the blacks. If we did not keep them enchained, during the day, and shut up during the night, they would rise upon us, and treacherously murder us. Perfidious Europeans! God is just; he renders Africa the instrument of taking venge-

* See Marmol's History of Africa.

ance for the wrongs of her own sons : most of the Europeans who are slaves here are navigators who go to the West India Islands, or to the coast of Africa, to bring misfortune on the blacks. You have introduced the crime of slavery into the coasts of Guinea, and God has put that of vengeance on the coast of Morocco.

Don Otorio. Wise minister of this great empire, we were obliged, from the time of our first establishments in America, to look for cultivators in Africa, in consequence of the want of men caused by our wars.

Empsael. And why then reduce them to slavery in America? Could they not cultivate the ground when in a state of freedom? What would you say if in a hive you saw bees reduced to slavery by lazy drones who subsisted on their labour?

Don Otorio. Illustrious Mussulman, the Spaniards were induced to carry negroes to their colonies by motives less selfish and more sublime than those of mere calculation; it was to give them the light of the true faith; for, my lord, the people in that part of the world are plunged in the darkness of paganism.

Empsael. If they wished to make brothers of them, why did they then make them slaves? It is to prevent negroes from breaking their chains that your religion gives a sanction to slavery.

Hypocritical Europeans! It is thus that you make a sport of God and man. Under the pretext of extending your religion, you become the tyrants of the world. No sooner do your merchants discover a rich country, than they endeavour to make a commercial establishment in it; if this be granted them, you send thither missionaries who go into the interior on pretence of trade. By dint of presents they obtain from the sovereign permission to preach to his subjects charity and submission to the laws. As this appears replete with advantage, both to prince and people, the priests very soon make proselytes; quarrels now arise between your religion and that of the country. It is then that your ships of war arrive; that your keepers of warehouses become soldiers, your counting-houses fortifications; your chapels, cathedrals; and that at length you overturn the religion of that state which received you. It was thus that you became masters of a part of the coast of Asia and of its islands, and that you attempted to take possession of China and Japan, where your name is looked on with horror.

Such has been your conduct towards rich nations: but when you land among a poor people, you behave with less ceremony. After being kindly received, you have no scruple in fixing on the coast a post with an inscription, by which

you declare that you take possession of the country in the name of your God and your prince. If you find it unadvisable to make an open display of your injustice, you put a post with an inscription into the ground with the intention of digging it up as a legitimate title to the property of the country. In some cases, a few mirrors, bells, or bottles of brandy, give the colour of a purchase to your usurpation. After intoxicating the sovereign, you proceed to strip his people. It was thus that you obtained possession of America, and of the eastern and southern coasts of Africa. You take very good care not to act thus with spirited nations, for you are tyrants with the weak, and weak with tyrants. At Constantinople, you kiss the ground before the great emperor of the faithful; in this country, your consuls do a thousand mean things, with a view to trade; but towards the good and simple people of Guinea, you act a perfidious part; tell me what harm did the poor negroes ever do the Europeans? They have no vessels to sail in your seas. They send neither priests nor soldiers to bring your people under their dominion; they build no forts on your coasts. You are the more to be blamed, because your religion, which, like ours, proceeds from God, enjoins you to treat all men as brethren.

Don Ozorio. People make an abuse of the

best things : if our missionaries go among savage nations, it is from the same motives as induce priests of your religion to go thither ; I mean that of bringing them to the pure worship of one God.

Empsaël. What, Christian, do you presume to compare your religion to that of the Prophet ? We have never reduced to slavery the people whom we conquered ; we use compulsion towards none of them in regard to matters of conscience. Greeks, Jews, Armenians, Copts, Maronites, all are free to exercise their paternal worship among us. Our priests, after extending the light of the crescent throughout the three great divisions of Arabia, and the Asiatic islands, abstained from any attempt to bring the inhabitants into subjection ; answer me if you can.

Almiri. Great minister, my master is unwell, do not afflict him.

Empsaël. Poor negro, you appear to me of an excellent disposition. (*To Ozorio.*) Do you speak in answer to me.

Don Ozorio. My lord, I give you offence in seeking to justify myself.

Empsaël. No you do not offend me ; my religion orders me to enter into explanations even with my slave. Speak. You are silent—I have promised to her to whom I can refuse nothing,

to treat you with kindness. I offer you a method of breaking your chains.

Almiri. O glorious Sultan, may your name be a thousand times blessed. O my poor master, you are going to be set at liberty.

Empsael. Faithful servant, you make no mention of yourself; you interest me greatly.

Don Ozorio. My lord, in what manner can I break my chains.

Empsael. By embracing my religion.

Don Ozorio. My lord, I cannot; I adhere to the one in which I was born.

Empsael. You ought to adhere to the one that is best. My religion has more of a divine character than yours, because it is more humane; it forbids us to keep our brethren in slavery; nay more, if any of our slaves is married, he is no longer accounted under an obligation to work for his master. Our law supposes with justice, that he owes his labour to his wife and children.* You see that it is more conformable than yours to the laws of Nature; open your eyes to the truth.

Don Ozorio. I cannot renounce the religion of my fathers.

Empsael. You refuse to become a convert

* See the Voyage to Morocco and Algiers, by the Fathers of the Trinity, in 1724.

only that you may indulge in drinking wine, and eating pork.

Don Ozorio. Righteous Mussulman, I adhere to my religion because I believe it the best; I have a God, a native country, a wife, children, and honour.

Empsael. And had not the negroes, whom you are in the habit of carrying away from Africa, likewise a country, friends, wives, and children?

Don Ozorio. Generous Empsael, put a price on my liberty; look at these weak and withered arms; at these shoulders galled by the weight of burdens; I am old and unfit to go through the labour of a state of servitude; I should soon die in irons without being useful to you.

Empsael. I make war on the wicked, but I do not traffic with them. Were you to give me four gold balls as large as those of the mosque of Abdul Mumen at the city of Morocco, I would not restore you to liberty: submit to the evils which you have inflicted upon others.

Don Ozorio. It is the law of my country that is in fault, and not I; I softened its execution as much as was in my power; I was going personally to buy slaves in Guinea, that they might be transported in a humane manner to my estate, where I was endeavouring to render them happy.

Almiri. He did render them happy ; it is the truth, I swear it by the sun.

Empsaël. By the sun!—dear banks of the Faleme.—You say you were a landholder?—In what country?

Don Ozorio. In the island of St. Domingo.

Empsaël (becoming angry). At St. Domingo! a landholder in St. Domingo! At that name my blood boils in my veins. What is your name?

Zoraid. My lord, recollect.

Empsaël. Speak, speak, or I'll put you to death.

Don Ozorio. I never could have done you any injury. I was on the way from my country for the first time when I was taken by one of your ships. I inhabited the southern part of St. Domingo, where I am known by my equitable behaviour towards all men ; I call to witness this unfortunate companion of my fate ; my name is Pedro Ozorio.

Empsaël. Ozorio! What is it you, you monster! See in me that Pedro who was once your slave!

Almiri (putting himself before Empsaël, and baring his breast). Strike, my lord, strike, but spare my master.

Empsaël (falls back with surprise on seeing the figure of the sun stamped on Almiri's breast ;

he says to him in a softened tone:) Too generous black ! what mother's hand stamped that sun on your breast ? In what part of Africa were you born, and what is your name ? Sacred token of my infancy and of my parents !—Speak without fear, and tell me how you became the slave of that barbarian ? If my country calls for vengeance against him, she implores all my pity for thee.

Almiri. My lord, I am a native of the country of Bambouk on the borders of the Faleme ; my name is Almiri ; I have neither native country nor parents. Alas ! I have nothing but a good master.

Empsael (showing his breast.) Almiri ! Oh my dear Almiri ! See here your brother Badombi. O companion of my innocent years ! O lamented brother ! How sweet it is to find you again. I see in you the image of my parents, and seem to recall to memory the once happy banks of the Faleme. Take off his chains ; prepare a bath for him, and a dress like mine. Yield obedience to his orders as you do to mine : he is my brother. (*Pointing to Ozorio*). Guards, lay hold of that man ; prepare torture for him, and red hot irons ; see there the reptile who kindled in my blood the thirst of vengeance ; Ozorio, cruel Ozorio ! In looking at you all the crimes of the Spaniards rush into my mind ; my brother carried off, my mother dead of grief, my country wasted, and

my father killed; I see St. Domingo once more; I hear the noise of the lash, the cries and groans of my countrymen. Your head suspended from Cape d'Aguer, that signal post of Atlas, shall for ever frighten the Europeans who pass within its sight on their way to cause sorrow to Africa.

Almiri. O Badombi, Ozorio acted the part of a father to me.

Empsacl. And to me the part of an executioner—he shall perish.

Zoraid. My dear husband, I entreat you by the tomb of Mentia.

Empsacl. O friendship! O vengeance! O love!—my heart cannot support your distress. I cannot bear to see sorrow stamped on your countenance; withdraw, you afflict me too much.

Almiri. O my brother! O Badombi! by the remembrance of our early years; by the love you bear me, do not refuse my master's life; it was he alone who comforted me for the misfortune of your loss. The ship that separated me from you, having carried me into the island of Cuba, I was purchased by a barbarous planter. After his death, I was led forth along with other blacks, to be sold by auction; while standing naked on the market place, and exposed to the observation of the merchants, a Spaniard came up and purchased me; he conducted me to St.

Domingo, and brought me up like his own son; this benefactor was Ozorio.

Empsael. O strange destiny! You were a slave in the same house as your brother; and you have been educated as a son in the house of my tyrant. (*He grasps him in his arms, but soon pushes him back with anger.*) He will then have filled you with aversion to our religion, to our country, to myself.

Almiri. O my brother, my love for my country and for you are engraven on my heart deeper than this image of the sun is stamped on my breast by the hands of our parents. (*He lays bare his breast.*)

Empsael. Swear to me by this same sun; are you not become my enemy!

Almiri (shedding tears). Your enemy! I who so much lamented you!

Zoraid. O Empsael! (*She is taken ill, her women run to her assistance. Empsael draws near to her, and supports her in his arms.*)

Don Ozorio. My lord, I have merited all your vengeance. Led astray by the laws of my country, I had forsaken those of Nature; but nothing was wanting on my part to make up for my injustice to you. Scarcely were you gone from St. Domingo, when I went in quest of you throughout all the Spanish West Indies; I met your brother in the island of Cuba; he has told

you of my manner of acting towards him. Before dying I was desirous to secure to him the means of support, and to restore him to liberty; but like many other men, I have had too long time to do evil, and not enough to do good. That Providence, which made you my slave at a time that I might have been a cause of prosperity to you, has placed you at the head of the most powerful empire in Africa, and has made me your slave in turn. Take your revenge, cut short this remnant of life which has been unhappy at all times. Life offers in the past nothing but repentance without the recollection of good actions, and for the future only torments without the hope of liberty.

Empsael (in a tone of distress). Liberty!

Zoraid (recovering). Empsael!

Empsael. My dear Zoraid!

Zoraid. Is this then the kindness you promised me? Shall I then be the cause of the death of this European, by calling him into your presence? What! the first emotion of my compassion will have been more dreadful to him than the vengeance of all your life. In the name of him who reserves immortal honour to the man who pardons, in the name of God.

Empsael (in a distressed tone). Your God, kind Zoraid, is not the God of the Europeans.

Zoraid (falls on her knees; all her women and

Almiri do the same). My dear husband, in the name of that God who has crowned you with glory during so many years, and who puts at this moment a beloved brother in your arms, and a repentant enemy at your feet.

Empsael (raising Zoraid, and clasping her in his arms). And who has given me my dear Zoraid. O Zoraid, O Almiri, you have gained your suit. Ozorio, I grant your life and liberty. Withdraw.

(Almiri throws himself at Ozorio's feet, and takes off his chains.)

Don Ozorio. Magnanimous Mussulman, I declare before that Providence, who brings together, when he thinks fit, men from the most distant climates, and who, sooner or later, punishes tyrants by the instruments which they held in the greatest contempt, that I will set at liberty all my negroes at my return to St. Domingo, and shall tell them that they are indebted for the boon to your clemency towards me.

Empsael. Tell them they owe it to Zoraid, and that I am indebted to her for the greatest of my victories.

THE END.

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